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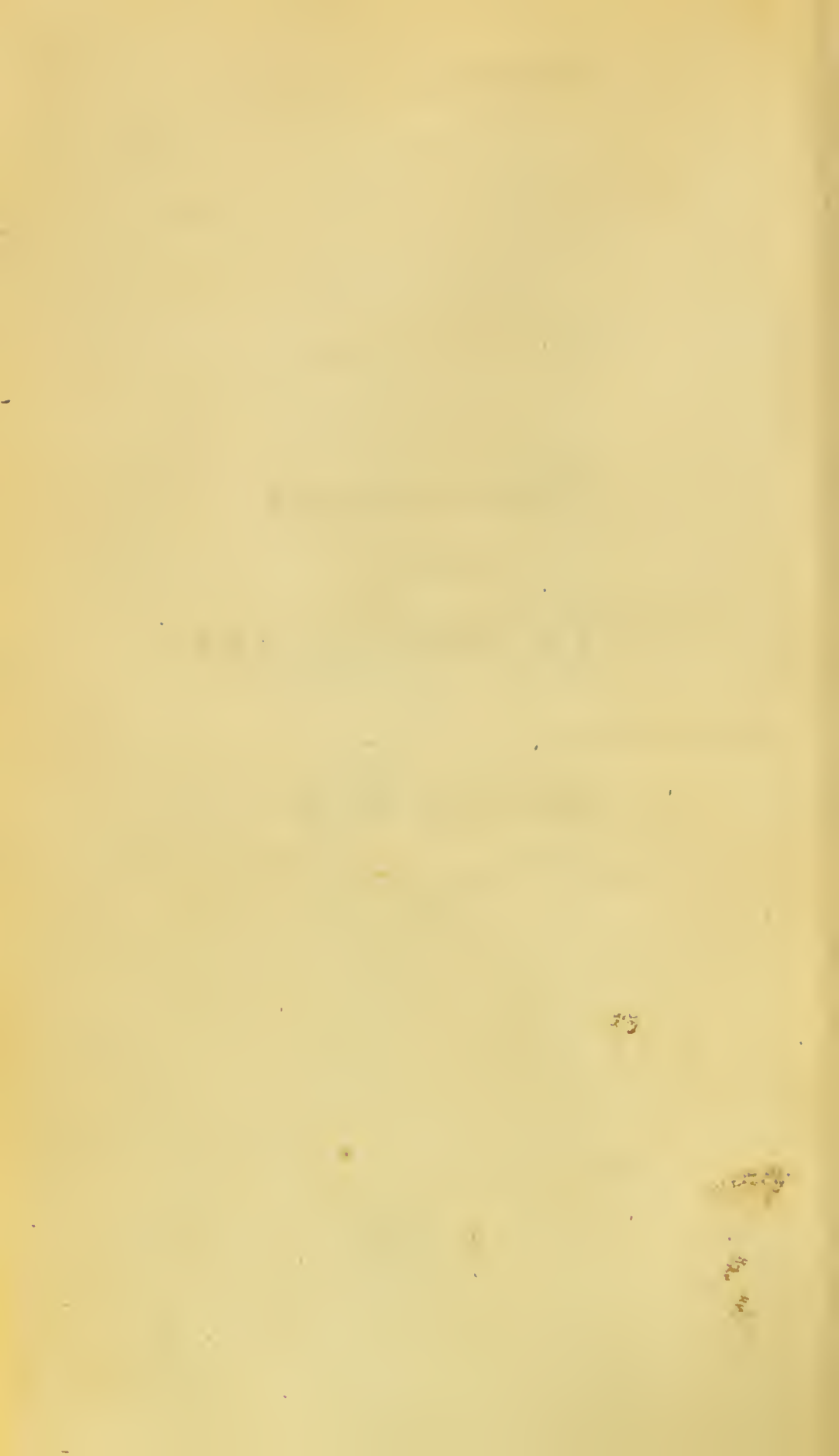
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OBSERVATIONS
ON THE
SEATS AND CAUSES
OF
DISEASES,
&c.



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OBSERVATIONS
Collegii ON THE *Regii*
SEATS AND CAUSES
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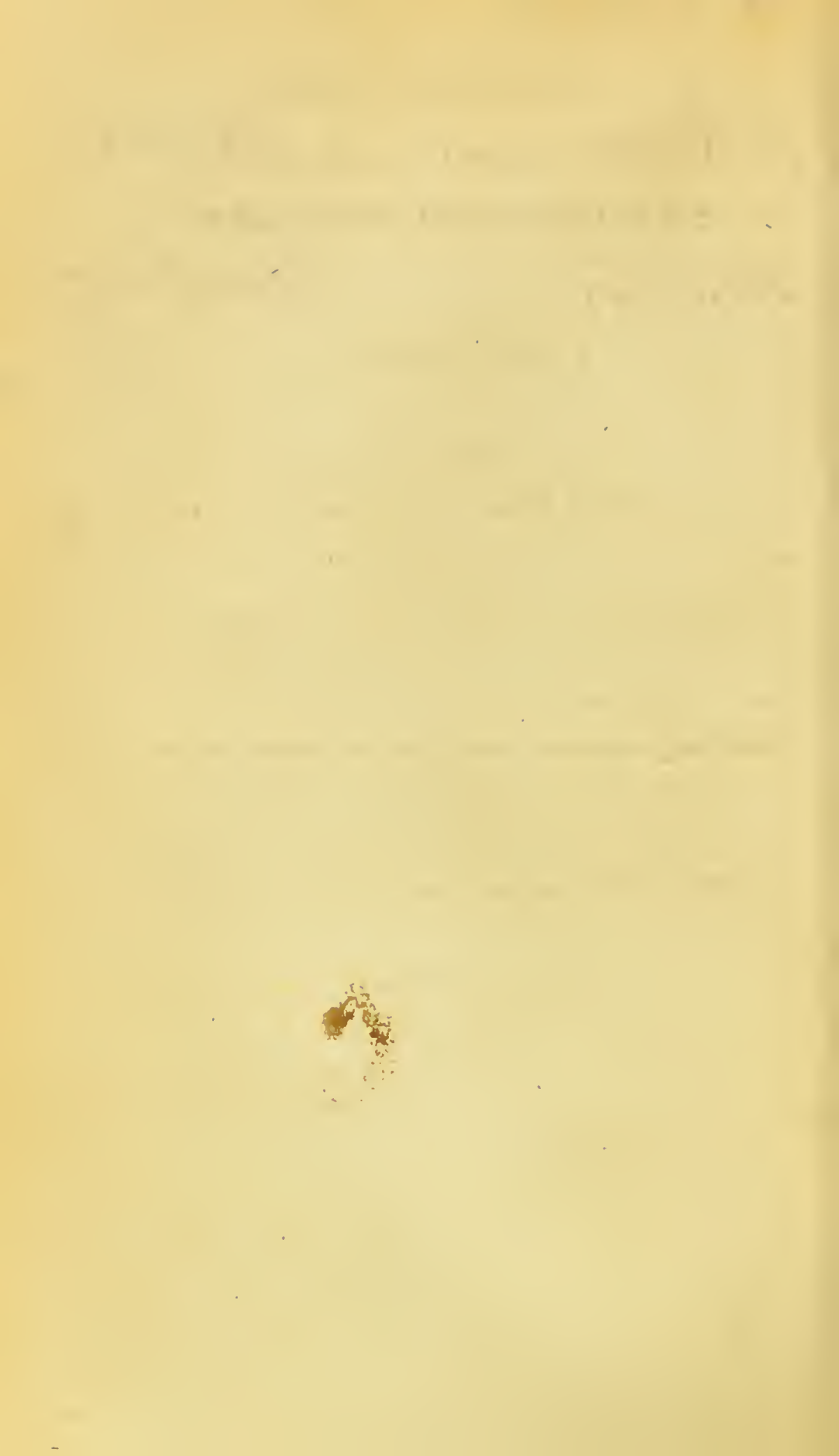
ILLUSTRATED BY THE
DISSECTIONS
OF THE LATE
PROFESSOR MORGAGNI OF PADUA.

BY
JAMES HAMILTON, JUNIOR, M. D.
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

VOL. I.

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1795.



BARTHOLOMEW PARR, M.D.

FELLOW OF THE ROYAL SOCIETY OF EDINBURGH, PHYSICIAN
TO THE DEVON AND EXETER INFIRMARY, ETC.

S I R,

I WISH I could offer a better proof of attention to the frequent and valuable advice, with which you honoured me at a very early period of my life, than what the following Work contains.

As it is, I have ventured to lay it at your feet; since it affords me an opportunity of assuring you, that neither the distance at which we are placed, nor the avocations in which we are severally engaged, can ever erase from my mind the sense I entertain of the favours you have conferred upon,

S I R,

Your much obliged

Humble Servant,

JAS. HAMILTON, JUNR.

Edinburgh, Castlehill, }
Jan. 20. 1795. }

PREFACE.

A VIEW of the morbid appearances in dead bodies, enables the medical practitioner to ascertain the causes of some diseases, and the consequences of others; and, therefore, can be useful only when connected with the symptoms which preceded death, and when applied to explain such symptoms.

On this principle, THEOPHILUS BONETUS published the *Sepulchretum Anatomicum*. But that work, even improved as it was by Mangetus, although in many respects valuable, being necessarily a rude sketch only, the celebrated Professor MORGAGNI of Padua undertook to render it more perfect, by the publication of *Seventy Letters on the Seats and Causes of Diseases*.

The great abilities, and extraordinary industry, displayed by MORGAGNI in these letters, deservedly entitle them to a much higher panegyric than it would be proper for the Editor of the following work to bestow.

So extensively, however, has medical knowledge been diffused since the publication of MORGAGNI's writings, although no more than a period of about thirty years has elapsed, that they are now deemed chiefly valuable on account of the facts which they contain. As, therefore, readers in general find they have to wade through a prodigious quantity of uninteresting matter, before they can arrive at what they regard as useful; these writings are at present seldom looked into, being only occasionally consulted as a dictionary.

The Editor of the following pages was induced, by these considerations, to believe, that, without deviating from the principles
of

of MORGAGNI's plan, such alterations might be made on the original work, as should contribute to render the many important facts with which it abounds extensively known, and consequently generally interesting.

No sooner had he formed the design of making an attempt of this kind, than he laid it aside, on Dr. Baillie's proposed publication on the Morbid Anatomy of the Human Body being announced. With great pleasure he yielded the task to one so much better qualified to undertake it. But, when that work appeared, he found that Dr. Baillie's views were very different from his own; and, flattering himself that the labours of both might be severally useful, he again resumed his intention.

The principles, by which he resolved to be directed in the execution of his project, were these—To retain only the facts witnessed by MORGAGNI, or his preceptor VAL-

SALVA, or that seem established on unequivocal authority—to new arrange the whole—to prefix to each collection of cases, a view of the general symptoms, and seat of the disease—and, to add, observations on the causes, and remarks on the histories, detailed.

The first part of his task was sufficiently easy. Not so the second; for he felt it very difficult to fix upon a suitable arrangement; and besides, so many cases were in the original classed under erroneous titles, that it required much time to assign to each its proper rank *.

As he has long thought, in common with many others, that, in nosology, diseases ought to be so classed, that those which are similar may be collected together, he adopted the
arrangement

* Within a parenthesis added to each case, the number of the letter, and of the article under which it is placed in the original, is marked.

arrangement of Macbride ; dividing diseases into Universal, Local, Sexual, and Infantile. This method seemed more analogous to that of MORGAGNI, and better adapted to his facts, than any other.

In the translation of the facts, the Editor has taken some liberties with the original, which perhaps may require an apology. He has omitted many of the little attending circumstances mentioned by MORGAGNI ; such as the dates of the cases, the names of the patients, &c. ; and he has uniformly translated the meaning, rather than the peculiar expressions. As to the former, he thought the dates, &c. little interesting to the general reader ; since they tend only to establish the authenticity of the cases, which seems quite unnecessary. With respect to the latter, he has always considered it to be the duty of the translator of a work, on any art or science, to communicate the meaning of the original in the most accurate style of
which

which language is susceptible. This rule seemed peculiarly applicable to the work of MORGAGNI; for the style of the whole is exceedingly uncouth.

But he has ventured still farther. In the original, many histories are only partially detailed; detached parts of them being inserted under different heads, and sometimes even in other works of the author. These he has brought together; his great aim having been to exhibit in a perspicuous manner every fact detailed.

In his task as a translator, the Editor thinks it incumbent on him to acknowledge the great assistance which he derived from the translation by Dr. Alexander. It lessened his labour, by serving as a sketch.

The history of the general symptoms of each disease, prefixed to the respective cases, has been compiled with care from such sources as seemed most authentic; and to these proper references are made.

The

The observations on the causes of diseases, comprehend the most modern opinions; and with these the ideas of MORGAGNI are occasionally incorporated. In this part of the work the Editor has endeavoured to say much in very few words; and on that account has avoided all minute reasoning, and has contented himself with stating only the chief arguments on every subject. Where he has dissented from others, he has expressed himself concisely, and he hopes with becoming diffidence. In treating of the causes of diseases, he has always wished rather to discover the deliberation of a sound judgment, than to display the sportings of a lively imagination. Though by the latter, the ignorant and unwary may be dazzled into admiration; it is upon the former alone, that the experienced and cautious will be inclined to depend.

The remarks he has added to the cases, being confined strictly to the explanation of
the

the respective diseases, are necessarily very short in the volume now offered. In the subsequent part of the work, references to many of the cases are occasionally made, and additional observations upon them are introduced.

The Editor hopes to complete that part of the work, allotted to Universal Diseases, within another volume; or, should the materials be found incompressible into that size, he engages that it shall not exceed two volumes.

It is meant that the Local, Sexual, and Infantile Diseases, shall be continued in a separate publication, conducted on the same plan.

C O N T E N T S.

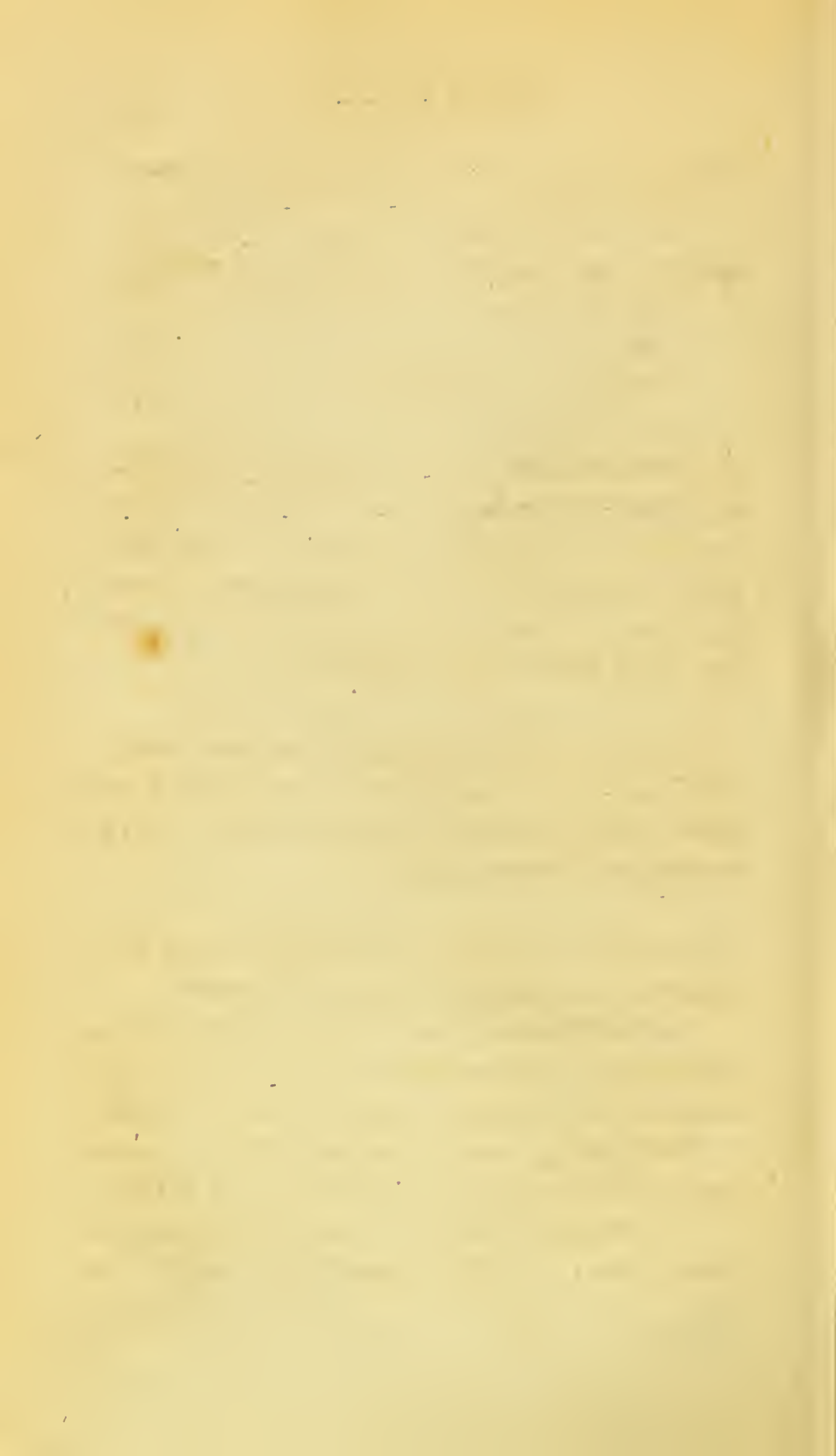
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PRELIMINARY OBSERVATIONS.

AS nothing can be more prejudicial to the study of any art or science than ambiguity in the language employed, it is necessary to premise, as an introduction to the following pages, the explanation of what is meant by the terms expressive of the different causes of disease.

The word Cause is, throughout the whole work, used according to the common acceptation of the term : MORGAGNI was no metaphysician ; and no more is the Editor of these pages.

The Causes of disease are divided into the *Predisponent*, the *Exciting*, and the *Proximate*.

The Predisponent cause, is that circumstance, or combination of circumstances, by which the body is rendered susceptible of any particular disease.

The Exciting cause, is that circumstance, on the application of which to the body disease follows.

The Proximate cause, is that circumstance, or combination of circumstances, from which the symptoms

symptoms of the disease arise. It is therefore the effect of the application of the exciting cause.

These definitions may be illustrated by a familiar example.

Persons who have a delicate habit and florid complexion, and at the same time a long slender neck and narrow chest, are much subject to a discharge of blood from the lungs. That particular conformation of the system is therefore regarded as the predisponent cause of the disease alluded to.

When in such persons violent passions of the mind are excited, or irregular action of the lungs takes place, or any accustomed evacuation is suddenly stopt, or the blood is circulated through the vessels with undue force, or when they indulge in a larger than usual proportion of food, and at the same time use less exercise, and a discharge of blood from the lungs ensues—One or more of these circumstances is to be considered as the exciting cause or causes of the disease.

The effect of the application of these exciting causes to the system of a person of that description, is the laceration or division of one or more blood-vessels within the lungs; and hence such laceration is deemed the proximate cause of the disease.

The predisponent and proximate cause, therefore, must exist in the system of the person affected;
whereas

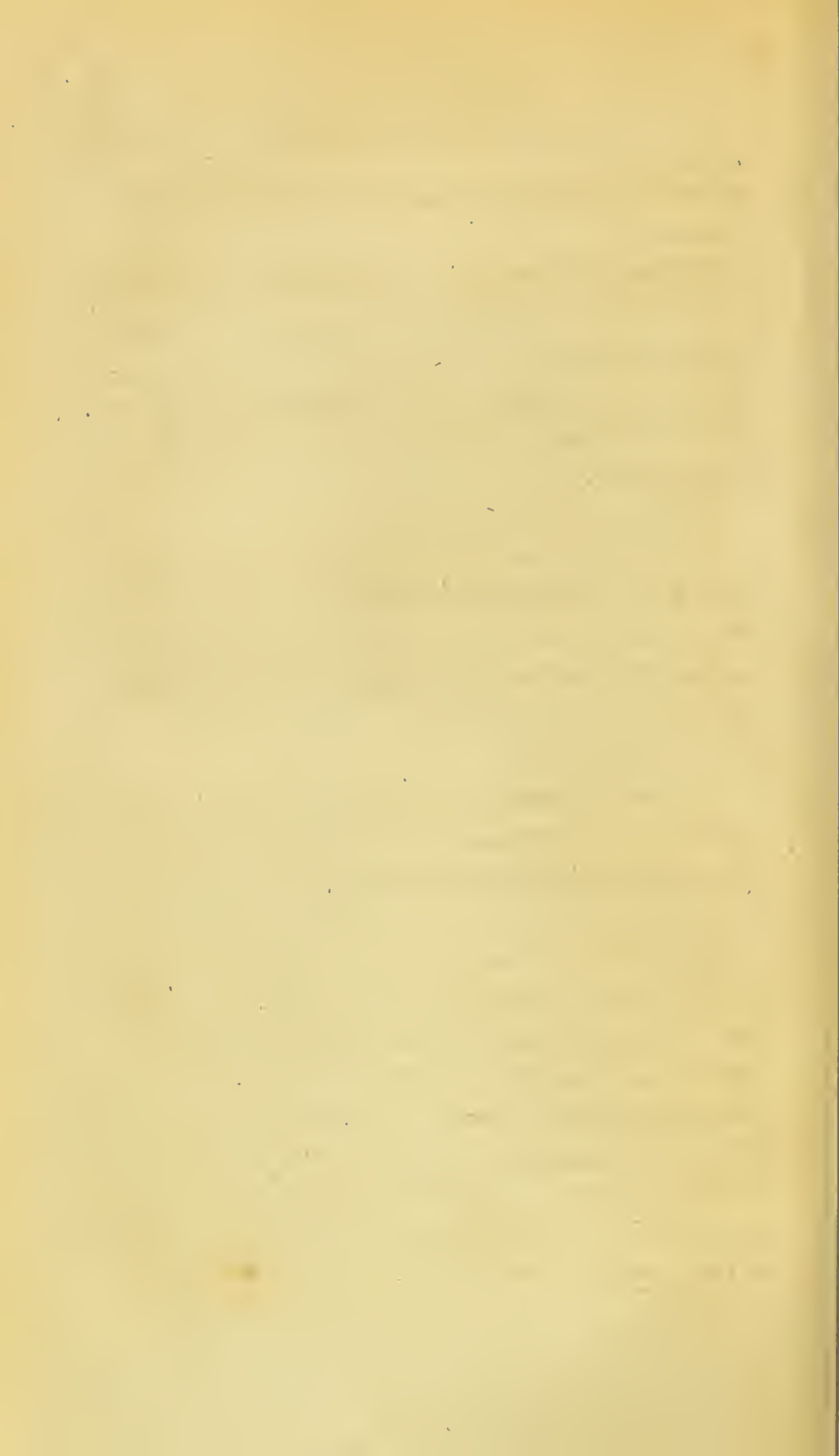
whereas the exciting may be some external circumstance.

Although, in general, the application of the exciting cause produces no effect, unless the predisponent previously exist; yet there are many exceptions to this rule. But the proximate cause can never take place, without being preceded by an exciting one.

A knowledge of the predisponent and exciting causes of morbid affections enables the physician to prevent diseases; and that of the proximate cause has been imagined necessary to direct him in the cure.

The predisponent and exciting causes are in many instances easily ascertained, and for a good reason, as they are discovered principally by observation. The latter are known by that means alone.

The proximate cause however cannot be ascertained, without an intimate acquaintance with the structure and functions of the human body.— But as such knowledge is yet in a very imperfect state, the proximate cause of diseases is still involved in so much obscurity, that it is discovered only in those disorders which are seated in a single organ, and in some particular part of the structure of that organ.



UNIVERSAL DISEASES.

CHAPTER I.

FEVERS.

SECT. I. *CONTINUED FEVER.*

§ I. CONTINUED INFLAMMATORY FEVER.

ACCORDING to Dr. Cullen's definition, Continued Inflammatory Fever, or what he calls Synocha, is that where, along with the general character of pyrexiaë, the heat of the body is very much increased; the pulse is frequent, full, and hard; the urine is red; the functions of the brain are but little deranged; and there is no primary local disease.

As this fever occurs very seldom, if ever, in this part of Great Britain, the description of its symp-

toms is necessarily taken from foreign authors, or from those who have copied from them *.

This fever is ushered in by slight rigors†, without any previous languor or signs of debility. The tongue is white and dry, attended with a bad taste in the mouth and thirst. The sense of smelling is impaired, and nausea is felt. A hot fit very soon succeeds; the pulse, which before had been small and depressed, becomes full, strong, and hard; and the heat of the body is so much increased, that it is equal to a degree not under 106 of Fahrenheit's scale, and sometimes exceeds that degree considerably. The face is much flushed; the eyes are inflamed, and impatient of bearing light. Headach, and sometimes pain of the back, take place. The tongue is black and parched, and the thirst continues excessive. The urine is high coloured, and the belly is costive. The breathing is generally laborious; and is sometimes attended with a short cough.

In favourable cases, a sweat breaks out after the hot fit; and the disease is thereby carried off within twenty four hours from its commencement. In other cases, the skin continues hot and dry; laborious

* Vide Junker Conspect. Therap. Special. pag. 484. Lommii Medicinal. Observat. p. 7. Liddellii Opera, p. 78. Eller Observat. de cognoscend. et curand. Morbis, p. 62. Home Princip. Med. p. 76. Meza Compend. Med. Pract. § 128, &c. Oosterdyk Præcept. Med. Pract. p. 38.

† Junker and Lominius allege that it is not preceded by rigors, but invades suddenly with great heat.

laborious breathing and headach remain unabated; restlessness or very disturbed sleep supervenes, attended with tinnitus aurium, and the appearance of motes floating before the eyes; and these symptoms are succeeded by delirium. In such cases, it sometimes happens that a double pulsation in the arteries can be perceived. Epistaxis, preceded by increased pain in the head and tinnitus aurium, violent throbbing at the temples and itching of the nose, sometimes occurs about the fourth or seventh day, and proves critical. The crisis, in other cases, is by urine, vomiting, sweating, or diarrhœa. If, however, yellowness of the skin appear before the seventh day, or if delirium, coma, or convulsions take place within the same period, the disease terminates fatally.

During the course of this fever, the pulse continues quick, full, and hard, until towards the crisis or termination of the disease. In favourable cases, it seldom exceeds one hundred and twenty or one hundred and thirty pulsations in a minute. The state of the tongue varies from being white and dry to a black colour, and to so great a degree of dryness that it is sometimes cracked. The urine, at first high coloured and in small quantity, becomes either natural, or in large quantity with a copious sediment, or bloody, or black and fetid, according to the nature of the event of the disease. The belly either continues obstinately costive, or

diarrhœa occurs. Night exacerbations are pretty distinctly marked. Great anxiety and despondency generally attend. Ulcers and issues, it is said, during the course of this fever, are dried up; and assume an inflamed appearance. Blood drawn during the disease is fizy.

This fever sometimes terminates in inflammation of the lungs. Persons under forty years of age are the most ordinary subjects of this disease; but, as the succeeding cases show, persons much beyond that age are not exempted from it.

The appearances on dissection, where inflammatory fever terminates fatally, generally exhibit effusions within the cranium, a determination of blood to the vessels of the head, and sometimes even suppuration within the brain.

From the symptoms of the disease, and from the appearances on dissection, it is probable that the seat of inflammatory fever is the sanguiferous system.

CASES OF CONTINUED INFLAMMATORY FEVER.

C A S E I. (X. 17.)

A YOUNG man, aged twenty five years, by trade a wool-comber, affected with continued fever, became so delirious that it was necessary to bind him.

The

The delirium having remitted, he was brought into the hospital of Padua. Immediately on his admission, convulsive motions of his superior extremities, and subfultus tendinum at the wrists, were observed. Venesection having been ordered, the blood exhibited no inflammatory crust; but its substance was dense and compact. He became quite comatose; and, having spoken none for the last three days, died.

Appearances on Dissection.

THORAX. Nothing remarkable was observed, in this cavity, except that one of the lobes of the lungs was hard. In separating the fifth dorsal vertebra from the sixth, a considerable quantity of fluid flowed out from the spinal tube. When the vessels in the neck were divided, much blood of a black colour was discharged.

HEAD. When the cranium was sawed through, a small quantity of fluid, similar to that in the spinal tube, issued out. The upper part of the cranium and the portion of the dura mater under it being removed, the vessels of the pia mater, on the posterior part of the left hemisphere of the brain were observed to be distended with black-coloured blood. Under the pia mater a kind of jelly was seen in several places, with air bubbles intermixed, although no bad smell was perceived in any part of the body; and it was not probable that, at that season of the year, a body should become putrid

trid within less than three days after death. The substance of the brain, when cut into, was found to be very hard ; bloody points appeared throughout its medullary substance, which forming immediately into large drops of blood, afforded ample proof of the presence of much fluid blood. The lateral ventricles contained scarcely any serous fluid ; they were shorter than usual. The plexus choroides were of a black red colour. The pineal gland was of a rosy colour ; its anterior and posterior surfaces were not depressed, as they usually are, but rather turgid and full. It was very hard, and when cut into was found to contain several small calculi as it were. One of these resembled a millet seed, both in magnitude and form ; but was of the hardness of bone, and seemed also, from the smell which it emitted when applied to the flame, to be of an osseous nature. The spinal marrow was accurately examined from its origin down to the fifth dorsal vertebra. All the vessels of the continuation of the pia mater, especially those on the posterior surface, were so much distended with blood that they resembled vessels which had been injected with red wax. The sanguiferous vessels which accompany the spinal nerves, especially some of these nerves, were also observed to be distended with blood.

C A S E II. (I. 12.)

A YOUNG woman, the wife of an indigent man, and the daughter of a woman subject to epilepsy, in consequence of being overheated after a journey, (in the month of February), was affected with a violent pain in the head and an ardent fever. These symptoms continuing, she died within the space of three or four days, having had no delirium, but having been often reservedly silent. When affected with the disease, she gave suck, and at the same time had the catamenia. For these reasons blood-letting had been delayed so long, that when, from the symptoms becoming worse, although the pulsation and strength of the arteries continued firm, half a pound of blood was drawn from the foot, it so happened that she immediately expired. The blood instantly coagulated very strongly.

Appearances on Dissection.

HEAD. The inside of the skull was of a brown red colour. The external surface of the pia mater on the upper part of the brain was covered with a yellowish fluid, in no great quantity, but spread equally over it. Its consistence was somewhat thick; and, although perfectly inodorous, it had altogether such an appearance that it seemed to be really purulent matter. The cerebrum was discoloured; but no mark of disorder could be perceived in the meninges

ges or brain, nor could any traces of the origin of the pus be discovered.

C A S E III. (LXII. 5.)

A SCAFFENGER, apparently aged about fifty years, of a robust habit, and of a healthy appearance, but rather plethoric, and addicted to drunkenness, was employed, along with his servants, in cleaning out the jakes of an hospital, at an unseasonable hour of the night, a time which is generally chosen for such business. As they were necessarily going to and fro, the master himself being left at one time alone, imagined that he saw a spectre clothed in white, and was immediately affected with universal tremor, while at the same time his mouth was distorted. In this state he was found by his servants, who carried him instantly to bed. Antispasmodics and cordials were immediately given; and the tremors having remitted, and the pulse become strong, half a pound of blood was drawn from his arm that night. In the morning, as much blood was taken from the other arm; for the tremors had remitted completely, and the pulse had become more full and febrile. On the following day also a vein was opened in the foot, as some alleviation of the symptoms, though for a short space of time, was perceived after each bleeding. The blood, especially in the first bleed-

ing,

- ing, came out in a frothy state, of a very black colour; the crassamentum was rather hard, and the serum in small quantity. The fever however continued; and, instead of the tremulous convulsive motions with which he had at first been affected, his whole body, from time to time, was agitated with violent tonic convulsions. He could not speak intelligibly, nor had he done so from the time that he had related to his servants what had happened to him. It was evident, however, that he knew the persons who were about him, and could distinguish them from one another. When he was able, he signified, by means of gestures, that he was affected with a very severe pain in the head. In consequence of these symptoms, to alleviate which several external and internal remedies, besides those mentioned, were in vain employed, he died, within six or seven days from the commencement of the disease.

Appearances on Dissection.

EXTERNALLY. The penis and scrotum were of a black colour, but the skin only was affected; the fingers were very rigid, but not the arms.

ABDOMEN. When the omentum, which had very little fat, was removed, the colon, in its whole extent distended with air, though not immoderately, was observed to follow such a direction, that, after having ascended to the liver, it descended from that to two or three inches below the na-

vel on the right side ; and having returned from that to its ordinary situation, which it retained as usual in going across under the stomach, lying in an oblique direction in the left side of the left hypochondriac region, and in a straight direction over the whole anterior surface of the left kidney, it again returned into the same hypochondre, and descending from thence, and entering the pelvis, it terminated on the rectum without any previous flexure. . The small intestines, except some tracts of them, especially a considerable portion of the ileum which lay very low in the pelvis, were distended with air. A yellow colour with which they were internally tinged, was seen through their coats ; for the bile, with which the gall-bladder was almost filled, had by exudation made the contiguous intestines externally yellow, and by flowing into them had rendered their internal surfaces of the same colour. The liver and spleen were of a leaden colour ; but although at the edge of the former viscus that colour was deeper, it did not in either extend beyond the surface. The spleen was of a moderate size ; the liver was large ; but both were found.

THORAX. The lungs scarcely adhered to the pleura : In the few places where they did, it was at the posterior part. They were rather turgid ; there appeared, in some places, pretty large vesications somewhat raised above the other parts of the
the

the surface; a kind of vesicles, as it were, seemed evidently to be included in these. There was no intermediate lobe on the right side, but the appearances were the same on it as in the left. The pericardium did not contain a single drop of fluid; its internal surface was still moist, so that it did not adhere to the heart, except very slightly in some places. In the heart there was almost no blood. This might perhaps happen from the blood having flowed out, in consequence of the large vessels below the diaphragm having been cut through, especially as the blood had been found fluid in several parts of the body. Two polypous concretions, however, were found in the heart. One of these extended from the right auricle into the vena cava superior; the other, which was somewhat more remarkable, being round, and thicker than one's little finger, also extended from the right ventricle into the pulmonary artery.

HEAD. Nothing remarkable appeared when the cranium and dura mater were cut through. But the vessels of the pia mater were so full of blood, that the smallest trunks seemed as if filled by injection. The vessels of the ventricles, and within the medullary substance of the brain, were also distended; and when the beginning of the spinal marrow, which had been taken out together with the medulla oblongata, was gently compressed, blood was observed to issue out, not only from the

fissure in its medullary substance, but also from the section of the cineritious substance which was nearest the fissure. A considerable quantity of limpid fluid was observed in both lateral ventricles; but the plexus choroides were red. No vesicles were perceived on them as there usually are, but several very small red particles, which were solid so as to seem glandular, were observed. The cerebrum and cerebellum were of the natural firmness. The fornix was flabby, as was also the internal surface of the trunk and crura of the medulla oblongata. A portion of the surface of the anterior lobes of the cerebrum, at the middle of the highest part where they are contiguous to each other, was so formed, that the one lobe was received into a hollow of the other. The remaining part of their surface was convoluted in the ordinary manner.

C A S E IV. (VII. 17.)

AN old woman was affected with a slight fever, which her physician hoped to have removed by the use of Peruvian bark. It did not, however, yield to this treatment; but, on the contrary, having become an acute fever, attended with slight wandering of the mind, she died.

Appearances on Dissection.

ABDOMEN. Two ureters proceeded from the
right

right kidney; the superior one was small, arising from a very simple pelvis; the inferior was thicker, as it proceeded from a pelvis which was rendered larger and more prominent, in consequence of many tubuli terminating in it. The progress and insertion of each ureter was as distinct as their origin; for the orifices of both opened at the distance of about a finger's breadth from the other into the bladder, in the same oblique direction as usual, in such a manner that the one was above the other. In the superior and posterior part of the fundus uteri an excrescence of a round form, and externally of a bloody colour, was found extending from the right side towards the left. Nearly a third part of its circumference, at the inferior and left side of it, was separated from the uterus so that it could be raised by the probe; the remaining portion was intimately connected with the uterus, and indeed seemed to be composed of the same substance; but, when cut into, it was found to be throughout of a paler colour, and harder and more compact. This was certainly the beginning of a scirrhus, or perhaps of an occult cancer in the very mildest state. It was flat, smooth, and so small that it could be covered with the first joint of one's thumb when extended. From the structure of the surface contiguous to the cervix uteri, and the appearance of the hymen, the edges of which were not broad, but were entire, it was evident

evident that the woman had had very little if any commerce with man.

THORAX. In the heart a kind of membrane, perforated like a sieve, or of a structure resembling net-work, was found to occupy the place of the valve of the coronary vein. Incipient ossifications, of a white colour, were seen in the internal surface of the aorta, a little above the semilunar valves, and at that part placed at the lumbar vertebrae.

HEAD. The brain was accurately examined; but nothing deserving notice appeared, except that the vessels of the pia mater were distended with blood. That membrane, it may also be observed, was easily separated from the brain in every place; and consequently, although little fluid was seen, it was evident that there must have been some.

C A S E V. (XI. 22.)

A WOMAN who had formerly had an apoplectic paroxysm, was again affected with the same disease, and afterwards remained in a stupid and semiparalytic state. Within one or two months from that period she became affected with fever, which was very violent; as the state of the pulse and the great thirst plainly indicated. Of this she died in the hospital of Bologna.

Appearances

Appearances on Dissection.

THORAX. A polypous concretion was found in each side of the heart. That on the left, had several branches; its trunk was more firm than that in the other side: externally it appeared surrounded with a tendinous substance; and internally its substance resembled that of firm compact flesh.

HEAD. The vessels of the cerebrum were in some degree turgid with black blood. The substance of the brain was so soft, that when in some places the dura and pia mater were drawn off, the cortical substance followed. A small quantity of watery fluid was found in the third ventricle.

C A S E VI. (VII. 7.)

A MAN, aged thirty-five years, was affected with a violent fever. He became delirious; his eyes glistened; and his pulse was quick and strong. At last he died.

Appearances on Dissection.

HEAD. The blood vessels of the brain were turgid from the contained blood. In the ventricles a small quantity of serous fluid was found. The brain was in a sound state.

The blood in every part of this body was fluid, except in the heart, in which some polypous concretions were observed.

C A S E VII. (IX. 12.)

A MAN, by trade a cook, formerly subject to diseases of the urinary passages, affected violently with continued fever, was received into the hospital at Bologna. Having been bled, the blood became so much coagulated that it adhered strongly to the sides of the glass vessel in which it was kept; and all the serum, which was in small quantity and bloody, was forced out on its top. He continued to grow worse, especially at night. About the twelfth day of the fever epileptic paroxysms supervened, and he died.

Appearances on Dissection.

ABDOMEN. One of the kidneys was round: it resembled somewhat a cancer, and contained calculi. The other kidney was twice as large as usual, probably from its performing the office of both.

THORAX. The pleura was inflamed. The heart and large vessels were distended with very black blood; which was very fluid, and still warm, although ten hours after death.

HEAD. All the vessels which creep over the surface of the brain appeared very red and exceedingly turgid. A small quantity of watery fluid, clear as lymph, was found in the ventricles.

C A S E VIII. (XLIX. 10.)

A WOMAN, aged twenty-five years, of a bilious temperament, affected with difficulty of breathing, was admitted into the hospital of Bologna. Along with the difficulty of breathing, she complained of pain in the left side of the thorax; within which, during respiration, a sound like that of matter was distinguished. Her pulse was quick, though soft. On the fifth day from the date of her admission, the jaundice supervened; and after having continued till the eighth day, it disappeared. At this time, from the obstinacy of the fever, blood letting, which had been employed on the first days of the complaint, was again had recourse to. Although the fever was not then so violent as to threaten death, she died suddenly.

Appearances on Dissection.

ABDOMEN. Every thing within the abdominal cavity appeared sound, except that it contained half a pound of watery fluid; a circumstance by no means uncommon.

THORAX. The right lobe of the lungs, which adhered to the ribs at its upper part, was at its lower part inflamed; and when its substance was there cut into, a little serous fluid was discharged. The left lobe was totally unconnected with the pleura, and was perfectly sound. A polypous

concretion extended from the right ventricle of the heart (in the muscular fibres of which its basis was placed) into the vena cava. It was of a firm structure; and its colour was at one part pale, and at another red.

C A S E IX. (XXXVIII. 22.)

A WOMAN, about thirty years of age, after long continued pains in the joints, became affected with a very copious, moist, scabby eruption. In order to repel this, she used some kind of ointment, by the advice of an empyric. By this means, the eruption was indeed dried up within a short time; but an acute fever, attended with great heat, with thirst, and with most excruciating pains in the head, was the consequence. To these symptoms, delirium, great difficulty of breathing, slight swelling of the whole body, and considerable swelling of the abdomen, together with much restlessness, supervened. On the sixth day from the time that the fever had forced her to keep bed, she died.

Appearances on Dissection.

ABDOMEN. When the belly, which was swelled and very tense, was opened, instead of water, the intestines and stomach burst out. These contained nothing but air; with which they were so much distended that the stomach filled more than half
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of the abdominal cavity. In that cavity, about a pound or more of limpid serum was found effused; which when exposed to the fire, seemed at first to be slightly coagulated, but afterwards, like the fluid of the pericardium, was entirely evaporated, leaving only a kind of yellow pellicle at the bottom of the vessel.

THORAX. The lungs adhered to the pleura by such a number of membranous substances resembling a gelatinous body, that it appeared they could not have been dilated so freely as usual. When these membranous substances were cut into, a pellucid fluid was discharged. The heart at the right side was connected with the pericardium by some membranous fibres. Its ventricles contained some fluid blood; and in the right ventricle, the beginning of a small polypous concretion was observed.

In the dissection of the body, it was found that, when the skin and flesh were cut into, no watery fluid was discharged; from whence it was evident that the universal swelling, mentioned in the history of the case, did not proceed either from œdema or from anasarca. A circumstance which was also confirmed by the feet not having pitted upon pressure.

C A S E X. (LV. 10.)

A WOMAN, aged forty years, addicted to the use of tobacco and wine, who had been married to a robust man, by trade a porter, but had never had any children, having been affected with a scabby eruption, had repeatedly drank sulphur mixed in wine, with a view to get rid of it. Having at last taken a larger than usual quantity of the same medicine, she began immediately to feel indisposed, and vomited repeatedly. She was soon after brought into the hospital at Padua, and was then feverish; had a hard and small pulse, and complained of great difficulty of breathing. Venesection was performed, and fresh drawn oil of almonds was given. During the succeeding day, as the difficulty of breathing was still more considerable, blood was again taken away; which, like that formerly drawn, had a firm compact crassamentum, but was not covered with any crust. Two cups-full also of milk were given when the cause of the disease was learned. The difficulty of breathing, however, having increased, evident convulsions of the extremities having supervened, and the pulse having become more languid, she died about the fourth day from the beginning of the disease.

Appearances

Appearances on Dissection.

EXTERNALLY. The body was in good condition, except that the skin was here and there deformed with a slight scabby eruption.

ABDOMEN. The belly was swelled; not from too great a proportion of fat, for that was both in proper condition and in proper quantity; nor from the extravasation of watery fluid, for, although there was some effused fluid, it was entirely confined to the pelvis; but from the stomach, the small intestines, and considerable tracts of the colon, being distended with air. The colon, in other parts, either preserved its natural width, or was very much contracted, as was observed in the left side near the stomach. The omentum covered none of the intestines, as it was forced upwards or retracted; both it, and that superior portion of the mesocolon which supports the transverse arch of the colon, were rigid, and were here and there, especially on the posterior part, marked with red spots. On the external surface of the stomach, the blood vessels were somewhat turgid. On the internal surface, at the fundus, near the antrum pylori, there was an area of a circular form, the diameter of which was about four fingers breadth. It was distinguished from the remaining surface of the stomach by being less smooth and less shining, but more white, and being furnished with blood-vessels, which were black, as if from injection; whereas the remainder

mainder was more smooth, more shining, and less white in colour; and exhibited almost no vessels, at least none so distinct or black. The internal coat of the stomach appeared eroded throughout the whole extent of the area. Except in that part, no mark of erosion or inflammation could be traced, either in the stomach, or in the adjoining part of the œsophagus or intestinal canal. The stomach was larger than ordinary; it had no rugæ; its parietes were very thin; and it scarcely retained any vestige of the ring of the pylorus. This latter circumstance, if it did not proceed from original conformation, or from some former disease, might be owing, as the others were, to the frequent distensions which must have taken place from drunkenness, and also to the late distension from the included air. The gall-bladder was contracted, and contained a very little bile. The kidneys were flabby; and the aorta was smaller than usual. The ovaria were even smaller and more shrivelled than they are at that age. A hydatid, of the bulk of an ordinary sized grape, adhered to the left ovarium. The uterus was inclined to the right side; its fundus was rather small. The cervix, especially at the lower part, was thicker than usual; and the os uteri was small and of a circular form, as in virgins. From this a fluid similar in colour and consistence to milk, which was not fetid, and not in very small quantity, distilled; from this it appeared

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that the woman had laboured under fluor albus. The source of this fluid was found to be higher than the lower part of the cervix. At that part the vesicles of the cervix contained mucus, probably more fluid than usual, but not like milk. None however were observed higher up. About the middle of the cervix, a round empty cell, capable of containing a small French bean, was found in two places buried within the substance of the parietes, which exhibited no marks of erosion either there or in any other place.

THORAX. The vertebræ of the thorax were bent to the right side much more than usual, which proved that the woman had been hump-backed; a circumstance that had been indicated by the lumbar vertebræ having appeared to have begun to incline to the left side, but so slightly that the innominata were not affected by it. No fluid was found effused in the thorax or pericardium. The lungs anteriorly, and at the sides, were very strongly connected to the pleura; they were besides tumid, and especially the left lobe, but only in consequence of air and a little fluid mixed with it. They were no where indurated, nor of a redder colour than natural. The ventricles of the heart contained coagulated blood of a black colour, as it was in the other parts of the body.

HEAD. All the contents of the cranium appeared more flabby than usual, although they were

were examined within eight days after death. The vessels of the pia mater were turgid with blood. A number of vesicles filled with watery fluid, and not very small, were observed in the choroid plexuses. All the contents of the cranium having been removed, that surface of both the petrous processes which is next the brain, and the parts contiguous to it, were found to be unequal, and not smooth as usual.

CAUSES OF CONTINUED INFLAMMATORY FEVER.

PREDISPONENT CAUSE. Although plethora, however induced, be evidently a necessary predisponent cause to this fever, it does not appear to be ascertained whether some other circumstance be not also required.

EXCITING CAUSES. Sudden transitions from heat to cold, swallowing cold drinks when the body is heated, excessive exercise, intemperance, violent passions of the mind, the sudden suppression of habitual evacuations, the sudden repulsion of eruptions, and what the French call a coup de soleil, are probably the sole exciting causes of this disease. That this fever never originates from personal infection is generally allowed; and the accounts of
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its having occasionally appeared as an epidemic * are too vague to be credited †, and even, although proved, could afford no decisive evidence that it was occasioned by contagion.

PROXIMATE CAUSE. Many modern physicians have considered all fevers to be produced by the same proximate cause ‡, and their opinion is now very generally received. Waving for the present the consideration of this subject, it may be observed, that the theories respecting the proximate cause of fever which have of late years prevailed, do not explain that of continued inflammatory fever.

The first of these theories is that of Boerhaave. He imagines that, in consequence of lentor of the blood, there is a stagnation and resistance in the extreme vessels; while, at the same time, the heart is irritated into irregular action from an inordinate motion of the nervous fluid into it §. Besides which, he supposes that, during the course of the

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fever,

* Vide, *An Enquiry into the Nature, Rise, and Progress of the Fevers most common in London*, by Wm. Grant, M. D. page 193; and Sydenham's Works, passim.

† Vide, *Collection d' Observations sur les Maladies et Constitutions Epidemiques*, par M. Lepecque de la Cloture, pag. 836.

‡ Vide, *The Works of Dr. Cullen*; and *Observations on Fevers*, by Dr. Clarke of Newcastle.

§ Vide, *Aphor. Boerhaavi*, 521, 598; et *Van Swieten Comment. in locis*.

fever, such a change in the fluids, as their becoming very thick, acrimonious, &c. may take place, as shall vary the type of the disease *.

Several circumstances contradict this theory: *First*, An inordinate motion of the nervous fluid is so vague an expression, that it is not easy to understand what is meant by it. *Secondly*, No satisfactory proofs have been produced, to render it certain that the state of the fluids is altered at the beginning of inflammatory fever; while, at the same time, many facts make it probable that the change in the blood is the consequence, and not the cause, of the increased action of the vascular system. And *Thirdly*, The determination of blood to the head, so general in this fever, is not explained by this theory.

The second opinion was originally suggested by Hoffman †, and has since been improved by Dr. Cullen. He alleges that, by the application of the remote causes of fever, the energy of the brain is diminished, and debility of the whole of the functions, and particularly of the action of the extreme vessels, is produced: that the nature of the animal oeconomy is such, that this debility proves an indirect stimulus to the sanguiferous system; whence, by the intervention of the cold stage and
spasm

* Vide Aph. 592, 593.

† Hoffmanni opera omnia, tom. ii. pag. 10.

Spasm connected with it, the action of the heart and larger arteries is increased ; and continues so till it has had the effect of restoring the energy of the brain, of extending the energy to the extreme vessels, of restoring therefore their action, and thereby especially overcoming the spasm affecting them ; upon the removing of which the excretion of sweat, and other marks of the relaxation of the excretories, take place*.

This theory does not explain the proximate cause of inflammatory fever, for the following reasons : *First*, Because, according to his own definition of the disease, the functions of the brain are little disturbed. *Secondly*, Because debility is generally more considerable at the end than at the beginning of the paroxysm. And *Thirdly*, Because in inflammatory fever the hot fit is violent, although the cold fit be slight ; whereas, were Dr. Cullen's theory true, the hot fit should always be in proportion to the preceding cold one.

These theories being found thus inadequate to the explanation of the proximate cause of this disease, it might be expected that some other should be here substituted : but it is much easier to overturn than to establish theories. The following observations therefore are offered merely as suggestions, designed only to afford a few imperfect hints.

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* Vide First Lines, par. 46.

The propensity of medical authors to attribute complex and contradictory phenomena to a single cause, has been highly prejudicial to the progress of medicine. It is probable that the different species of fevers proceed from different proximate causes; and hence, in the investigation of the cause of each, the phenomena peculiar to each species, and not those common to all, ought to be considered. This is the more particularly necessary, as all diseases consist of primary and secondary symptoms; for no part of the body can be deranged without other parts being affected. As a preliminary step, therefore, to the investigation of the proximate cause of inflammatory fever, it is necessary to ascertain the primary symptoms. These appear to be, violent action of the sanguiferous system, and increased heat of the whole body. All the other symptoms seem to be secondary. An exception indeed may be urged in favour of the cold fit; but as that symptom is not only common to all fevers, but also sometimes perhaps is wanting in inflammatory fever, it cannot be regarded as a primary one. Besides, it may appear to some, that increased heat of the body should not be stated as a primary symptom, from its being probably the consequence of the increased action of the vascular system. There is, however, some ambiguity in this circumstance;

for increased heat of the body, or at least of particular parts of it, is sometimes felt independent of increased action of the sanguiferous system. As the primary symptoms of the disease cannot be very clearly ascertained, an attempt to explain those mentioned might not perhaps be deemed very satisfactory.

It is well known that, in a state of health, exposure to any of the exciting causes of inflammatory fever produces a train of symptoms resembling those of that fever, which in a few hours spontaneously cease by the eruption of sweat. To what circumstance then ought the permanent increased action of the vascular system in inflammatory fever to be attributed? Can the plethoric state of the system, previous to the application of the exciting cause, account for the difference in the degree of violence and duration of these symptoms in the two cases?

With respect to the secondary symptoms, that which it is most difficult to explain is the cold fit. As for the reasons already stated, it ought to be considered as an accessory, and not a necessary symptom: it cannot be regarded as depending solely on the action of the exciting causes. That it depends upon the diminished action of the vessels on the surface of the body is very evident; but whether this proceeds from the action of causes applied immediately to the sanguiferous system itself,

itself, or mediately through the nervous system, is not easily determined.

That the deviation from nature in the appearance of the blood is the consequence of the increased action of the vessels has been generally admitted. Yet it is probable that it is not owing exclusively to that circumstance.

The determination of blood to the head so obvious, not only from the symptoms, but also from the appearances on dissection, deserves particular notice, as it may perhaps afford a clue to the labyrinth in which the proximate cause of inflammatory fever has been hitherto concealed.

REMARKS ON THE CASES OF INFLAMMATORY FEVER.

THOSE cases prove decidedly, in contradiction to the assertions of many medical practitioners, the existence of inflammatory fever, as described in the preceding pages from the writings of authors.

The third, fourth, and fifth cases, show that this fever does not occur exclusively in persons under forty years of age; and that it is not, as has been alledged by some, confined to cold climates, as all of them occurred in Italy.

The eighth case affords a striking illustration of
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the observations of Lommius, respecting the danger of yellowness of the skin, when it occurs before the seventh day; and also respecting the tendency of this fever to terminate in inflammation of the lungs.

§ 2. NERVOUS FEVER, OR TYPHUS.

AS this fever appears under a variety of forms, it has been divided by authors into various species. Unless this plan were adopted, an accurate description of its symptoms and types could not be given.

I. SLOW NERVOUS FEVER, OR TYPHUS MITIOR *.
This does not, like the inflammatory fever, invade suddenly. The patient at first feels listless and oppressed; his appetite for food is diminished; he is restless; has great dejection of spirits; feels an unusual weariness after the least motion; and has alternate chills and shiverings, with sudden flushes of heat. A lucid interval generally takes place

* The symptoms of this fever are detailed more accurately by Huxham, p. 74, than by any other author. The description here given is borrowed chiefly from him.

place in the morning, but all the symptoms are aggravated at night; and this circumstance continues, in a greater or less degree, throughout the progress of the disease. After two or three days, vertigo, or pain of the head, especially about the hinder part, attended sometimes with a sense of coldness in the course of the coronary suture; nausea, with the vomiting of insipid phlegm, and great prostration of strength, especially felt when the erect posture is attempted, supervene. At the same time, the heat of the body is not considerably increased; the pulse is quick, weak, and irregular; the tongue is moist, white, and covered with a viscid mucus; the breathing is difficult, accompanied with oppression about the præcordia; the urine is pale, watery, and sometimes like whey; the belly is generally costive. Insomnolency takes place; and although sometimes the patient appears to be asleep he is quite unconscious of it. All these symptoms are attended with great inability to exert the powers of the mind or of the body.

In this situation the patient continues for some days; the symptoms then become aggravated; the face is sometimes hot and flushed when the feet are cold, and at the same time cold sweats on the forehead and on the backs of the hands break out. Tinnitus aurium takes place, and may be regarded as the forerunner of delirium. Deliquia
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often occur, especially if the erect posture be attempted. If at this period of the disease the urine continue clear and watery, delirium with subfultus tendinum ensue. The delirium is seldom violent, appearing at first when the patient awakes like the continuance of a dream; from which state the patient recollects himself for a little; but the confusion soon returns, and from this he cannot for some time be roused. At last he continues in a constant dozing muttering state. Profuse sweats or colliquative diarrhœa succeed; the patient is quite stupified, and insensible to the impressions of both light and noise, although at the beginning he had been remarkably susceptible of such impressions. Great exhaustion now takes place; the tongue, which is dry, especially in the middle, trembles when the patient puts it out; the extremities are cold; the nails of the fingers are livid; the pulse flutters, is so indistinct as scarcely to be felt, and is easily compressible. Trembling and twitching of the hands sometimes occur, and are the preludes to strong convulsions which snap the thread of life. In other cases, the senses of seeing and hearing are completely lost; the delirium is converted into coma; the stools and urine pass involuntarily; subfultus tendinum supervene; a particular noise in the throat, emphatically called rattling in the throat, is heard; and the patient sinks. This fatal termination most

generally happens about the fourteenth day, seldom before the eighth or ninth, nor after the thirtieth.

The termination of this fever is very uncertain; and it is impossible, at the beginning, to judge whether recovery or death shall happen: For sometimes, after the symptoms have been quite slight, a sudden aggravation takes place, and the patient is cut off; while, in other cases, the most alarming symptoms, such as convulsions, coma, &c. precede a favourable change. In general, however, if the patient survive the fourteenth day without any bad symptoms, recovery may be expected.

Moist tongue, soft skin with gentle sweats, the pulse continuing firm or becoming strong, the urine depositing a copious sediment, and more especially slowness of the pulse after gentle sweats or moderate diarrhœa, the appearance of the stools becoming natural, and the appetite for food returning, are favourable signs. A pretty free salivation also without aphthæ, attended with kindly moisture of the skin, and imposthumes about the ear or about the parotid gland, or a large, pustular and angry eruption about the lips and nose, are regarded as symptoms portending a favourable event.

On the contrary, where the delirium supervenes early, and continues above four days; where there are profuse discharges, either in the form of diarrhœa

rhœa or colliquative sweats, along with weak pulse; where there is subfultus tendinum, tremors of the hands or of the tongue, constant insomnolency, blindness, impeded deglutition (which takes place, when it occurs, about the eleventh day) more especially if attended with singultus; where the extremities are cold, and livid petechiæ appear, much danger is to be apprehended. But, as already stated, it is very difficult, or perhaps rather impossible, to form a decisive opinion respecting the event.

In most cases, gangrene, in a greater or less degree, occurs in those parts on which the body had principally rested during the progress of the disease. In general, the sores in consequence heal kindly, after the feverish symptoms have disappeared; but sometimes it happens that the ulcerations are so very extensive that the patient sinks under the discharge.

II. MALIGNANT PUTRID FEVER, or TYPHUS GRAVIOR *. In this species, the symptoms at the beginning are more violent than in the former. The rigors, if any take place, are more considerable; there is intense distressing heat, at first remittent, afterwards permanent; the pulse is hard, small, quick, and unequal; there is great prostration

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* For an accurate description of the symptoms of this species, see Huxham, p. 92; also Home, Princip. Medicin. p. 28.

tion of strength, and much anxiety and despondency. Great nausea and vomiting of black bile, violent pain of the head and of the temples, throbbing of the temporal and carotid arteries, tinnitus aurium, and laborious respiration, interrupted by sighing, attend; and at the same time the breath is fetid. The eyes are inflamed, and a pain is felt about the orbits; the countenance seems bloated, and has a cadaverous appearance. Pains in the stomach, limbs, and back, supervene; and also tremors and delirium. The tongue at first is white, afterwards becomes black and dry, so as to render the speech inarticulate; the lips and teeth are covered with a black viscid fordes; and there is great thirst, with a bitter taste in the mouth. Sometimes, however, although the tongue and fauces be remarkably parched, no thirst is felt: in such cases, phrenzy or coma always ensue. The urine is at first pale; but, during the progress of the disease, becomes very high coloured, and sometimes black, with a very fetid foot-like sediment. The stools are intolerably stinking; of a green, livid, or black colour; and frequently attended with gripes, and with the discharge of blood. Small livid or red-coloured spots, like flea-bites, called petechiæ, or broad spots of the same colour, called vibices, appear over the body, sometimes about the fourth or fifth day, and sometimes not till the eleventh day, or even later.

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An efflorescence also like the measles, but of a less bright colour, in which the skin, especially on the breast, appears as it were marbled and variegated, is in some cases observed. These eruptions are commonly attended or preceded by profuse fetid sweats. Sometimes, though very rarely, on the eruption of the sweat the petechiæ disappear, and small white miliary pustules break out: in other cases an itching, smarting, red rash, or large fretting watery bladders on the back, breast, shoulders, &c. are observed. White or dark coloured aphthæ appear in the mouth; and are soon succeeded by great difficulty of swallowing, pain in and ulceration of the fauces, the œsophagus, &c. together with incessant singultus. Hæmorrhages, sometimes from the nose, but more commonly from the intestines, as the stools are bloody, and at the same time sanious, black, and horribly fetid, then take place. Towards the end of the disease, where it terminates fatally, the petechiæ become of a green dark colour, or livid black vibices appear; and these, together with coldness of the extremities, are generally the forerunners of death. Blood drawn during the course of this fever has a livid appearance, has its component parts scarcely cohering, and soon runs into putrefaction.

As in the former species of typhus, so also in this, no certain opinion respecting the event of the disease

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can be formed. The most favourable symptoms are: a yellow or brown colour of the stools; the fetid diarrhœa and sweating not taking place till a late period of the disease; and the petechiæ changing from a dark to a bright red colour. The bad symptoms are: no thirst; numerous black petechiæ, or the sudden recession of the petechiæ, with a very feeble pulse; livid aphthæ; inflammation of the fauces; laborious respiration after the appearance of a miliary eruption; swelling of the abdomen after profuse stools; diarrhœa, with the discharge of very fetid, bloody, ichorous matter; coldness of the extremities; and convulsions.

The appearances on dissection in those who die of this fever exhibit inflammation and often gangrene of the brain and other viscera, more especially the stomach and intestines*.

III. YELLOW FEVER†. This species of fever occurs in America, and the West-Indies. It begins

* Vide Home Princip. Medicin. pag. 89; also the Translation of Hoffman, revised and corrected by Dr. Duncan, vol. i. page 169.

† For an account of this fever, see, A Treatise concerning the Malignant Fever in Barbadoes, by Henry Warren, M.D. p. 9; Rouppe de Morbis Navigantium, pag. 304; Blane on the Diseases of Seamen; Hillary's Observations on the Diseases of Barbadoes; Mackittrick Dissertatio de Febre Indiæ Occidentalis Maligna flavâ; and an Inaugural Dissertation on the subject by Sam. Curtin in Webster's Medicinæ Praxeos Systema, vol. i.

gins with a sudden faintness, sometimes giddiness, succeeded by slight sense of cold; severe pain in the head above the eye-brows; with a slight nausea, and impaired appetite. Intense heat soon after succeeds; the face is flushed; the eyes are impatient of light, are inflamed, and have a painful sense of heat. The pulse, in the mean time, is full, quick, but soft; the carotid arteries throb; while the pain of the head is so violent, that the patient feels as if the temples should be rent asunder; pains are also felt in the joints, and in the loins. The nausea becomes aggravated, and vomiting is excited; and this state of stomach continues throughout the whole disease, every thing that is swallowed being commonly rejected. The matter vomited has different appearances: sometimes it consists merely of what had been swallowed; at other times it is pure bile; and at other times, it seems to be acrid bile. Straitness and oppression about the præcordia accompany the vomiting. The hypochondria, at the same time, generally become more or less swelled; and great soreness to the touch is felt at the pit of the stomach. When the patient attempts the erect posture, he is giddy, and feels as if he should fall. Obstinate insomnolency takes place; or, if he have a short sleep, the patient awakens in a fright. Great thirst and a bitter taste in the mouth are felt. The tongue, at the beginning of the disease,

appears

appears in some cases shining; in others white; and on very rare occasions, it is of a yellow colour, and covered with fordes. The belly is for the most part bound; but sometimes diarrhœa takes place at the beginning. The urine is high coloured, and is secreted in less quantity than usual. In this manner the disease begins. Within thirty-six or forty-eight hours, however, that is generally in the morning of the second day after the attack, a deceitful remission happens, that imposes upon the patient and attendants. But within a few hours the vomiting becomes more violent than formerly; and the matter vomited is commonly black. Excessive thirst is felt. The tongue is rough and brown in the middle; but below, and at the sides, it is, together with the gums and lips, of a very florid red colour: towards the end of the disease, it frequently appears black. These symptoms are commonly aggravated towards the evening, and are succeeded by a very restless night. On the third day, though sometimes sooner and sometimes later, a clammy sweat, that is by no means refreshing, breaks out; the pulse becomes slow, languid, and soft; the skin is sensibly cold; and an appearance of relief again takes place. But, instead of relief, the strength of the patient is more and more impaired; a constant anxiety continues; the respirations become less frequent, and the breathing is

loud. Delirium is induced by the slightest causes, principally when the patient attempts to raise himself in bed. The face and neck become yellow instead of red; but the redness again returns for a short time. The watchfulness is more constant; the patient is sometimes slightly delirious, and again becomes sufficiently recollected. The redness of the eyes is first changed into a brown, and then into a yellow colour; with which, in a short time after, the whole external surface of the body is tinged. The vomiting is not so troublesome upon the fourth day. Putrid bile, however, mixed with black blood, is vomited, and is passed also by stool, but is not attended with gripes. Blood in a dissolved state is effused, sometimes from the nose, and sometimes from the gums. The pulse becomes small, fluttering, and intermitting; and almost constant singultus attends. The hands and feet are cold, and at the same time swelled, and of a purple colour. The lips are parched, and covered with a livid fordes; the urine is very yellow, and deposits a sediment which is almost quite black. Coma now supervenes: and in some cases the breathing is like that in apoplexy, now stertorous, and now easy; in other cases coma is very slight, and is interrupted by delirium. Matters remain sometimes in this situation for twenty-four or thirty-six hours, the patient lying like one almost dead, and scarcely any

pulsation being felt at the wrist. In the mean time broad livid spots appear about the præcordia and loins. Violent convulsions at last come on, which terminate in death.

The event of this fever is always very precarious. It often proves fatal within twenty-four hours after its attack. Sometimes the fatal termination is protracted to the eleventh or twelfth day; but it most commonly happens between the fourth and seventh. Where the patient recovers, there is no regularly marked crisis. The bad symptoms are: extreme weakness from the beginning; early black vomiting, as, before the fourth day; early yellowness of the skin; hæmorrhages from the nose, lungs, or urinary passages, after the third day; and livid blotches about the præcordia and loins. The favourable symptoms are: firmness of the pulse; no extreme prostration of strength; no black vomiting, nor yellowness of the skin, till after the fifth or sixth day; and, on some rare occasions, a large eruption of boils over the whole body.

In addition to the above history, the following circumstances, detailed by Dr Rush, as having characterised the yellow fever which appeared at Philadelphia in 1793, deserve attention.

The pulse was, both at the beginning and during the course of the disease, exceedingly irregular. At the beginning, although often full, tense, and quick,

it was frequently so low as scarcely to be felt at the wrists; or intermitting, or preternaturally slow. Dilatation of the pupil generally occurred in cases where it was slow; but the slowness of the pulse usually preceded the dilatation of the pupil. After the fever had continued for some weeks, and the weather had become more cool, (that is, after the tenth of September) the pulse was as full, tense, quick, and frequent, at the beginning, as in cases of pleurisy; at the same time, however, it communicated, when felt, a peculiar sensation to the fingers, no two pulsations being exactly similar. It was equally full, hard, and frequent, in the remissions of the fever as in the exacerbations. Although before death it commonly became weak, frequent, and imperceptible; yet in several cases it was full, active, and even tense, during the last hours of life.

Many complained of a dull pain in the region of the liver; but few of that soreness to the touch at the pit of the stomach noticed in all former histories of the yellow fever. A burning pain, however, in the region of the stomach, accompanied the vomiting which occurred about the fourth or fifth day. The appearance of what was vomited was different at different stages of the disease. On the first and second days, it consisted commonly of pure bile. About the fourth or fifth day, it resembled coffee impregnated with its grounds. To-

wards the close of the disease, it was of a pale black colour, and seemed to be acrid bile with a flaky substance floating in it; and at the very close it was dark-coloured grumous blood. Along with these discharges of the stomach, there was a large worm sometimes, and often tough mucus.

The stools varied in appearance according to the treatment of the disease. They generally indicated a superabundance of bile; but in some cases they were as white as in jaundice. The discharge of urine was sometimes accompanied by a burning pain, resembling that which takes place in gonorrhœa. A total deficiency in the secretion of urine, without any pain, occurred in many cases for a day or two.

Tremors of the limbs, and twitchings of the tendons, previous to the fatal termination of the disease, were uncommon. In some cases, a morbid degree of strength to a wonderful extent took place at that period. In the greatest number of instances, the patients died in a placid manner.

The disease appeared under a variety of forms. It was often so mild that the patients were not confined to their beds. In such cases, the only symptoms were, fallowness of the countenance, nausea, universal languor, and irregularity of the pulse. It appeared invariably to affect chiefly the weak parts of the system which it attacked; as the head, the lungs, the stomach, the
2 bowels,

bowels, and the limbs, suffered more or less according as they were more or less debilitated by previous inflammatory or nervous diseases. Soon after the fever became generally prevalent, every other disease seemed to yield to its superior influence; and hence a number of anomalous symptoms occurred, in many cases, which imposed on several practitioners the belief that in such cases the fever did not exist.

The appetite for food returned much sooner during the course of convalescence after this disease than it does in ordinary fevers *.

WHERE death happens, the process of putrefaction advances so rapidly, that it is often necessary to inter the body within a few hours after the fatal event. The appearances on dissection † exhibit the stomach, intestines, and mesentary, covered with gangrenous spots. The orifice of the stomach seems greatly affected, the spots upon it being ulcerated. The liver and lungs are said to appear also of a putrid colour and texture.

Dr Rush remarks, that the appearances on dissection were different in different cases; and seemed to be owing to determinations of the fluids

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* Vide, An Account of the Bilious Remitting Yellow Fever, as it appeared in the city of Philadelphia in the year 1793; by B. Rush, M. D. p. 40 et seq.

† Vide Lind's Essay on the Diseases of Europeans in Hot Climates, p. 114.

to different parts *. Unequivocal symptoms of morbid congestions of blood in several of the viscera, but more especially in the brain, appeared, he observes, in many cases †.

IV. MIXED CONTINUED FEVER, or SYNOCHUS. Cases frequently happen where the symptoms of fever do not occur in the order of succession mentioned under the three preceding heads. Those fevers, according to Dr Cullen, generally consist of such a complication of the symptoms of inflammatory and nervous fever, that it is at the beginning difficult to ascertain the species to which they belong; but that at first the symptoms are those of inflammatory fever; and afterwards, sometimes gradually and sometimes suddenly, they degenerate into those of typhus.

Fevers of this kind appear frequently in Scotland. Although on their first attack they be attended with violent pain in the head, strong hard quick pulse, flushed face, intense heat, sometimes not preceded either by languor or by a cold fit; yet the nausea, giddiness, and diminished energy of the brain, which at the same time take place, together with certain circumstances respecting their exciting causes, to be afterwards mentioned, clearly show that the disease is to be referred to the

the species of typhus, as the event of the case sooner or later proves.

FROM the above description of the various species of continued nervous fever it appears, that the essential characters of typhus are, impaired energy of the brain, considerable prostration of strength, irregular action of the vascular system, and a deranged state of the chylopoetic viscera. This definition, however, is neither so accurate nor so satisfactory as could be wished ; yet it is not easy, nor perhaps in the present imperfect state of physiology possible, to form a better one from the history of the symptoms alone.

Typhus therefore differs from synocha in one of the great essential characters ; namely, impaired energy of the brain. It differs too in several other particulars respecting the symptoms ; as, in being preceded by languor and listlessness, in being attended with a weak pulse, &c. and in being protracted to a longer period.

The seat of the disease in typhus has not yet been clearly ascertained. Every part of the system is affected ; the powers both of the body and mind are deranged ; and it is difficult to determine whether one part be affected before the others, and whether the derangement of one part depend upon or be unconnected with that of others.

CASES OF CONTINUED NERVOUS FEVER.

I. SLOW NERVOUS FEVER.

C A S E I. (XLIX. 2.)

A MAN, of about thirty years of age, was affected with a slow fever; which was accompanied with no symptom deserving notice, except that his appetite for food had entirely failed. His pulse and strength became every day weaker; and at length he died suddenly.

Appearances on Dissection.

ABDOMEN. The bile in the gall bladder was tinged of a brown colour. A calculus of the size of a dens molaris, of a pale colour, and very friable on its surface, was found in it. This gall stone contained several other small ones of a black colour.

THORAX. The lungs were marked with black spots. The pericardium contained little or no serum. The blood, which in other parts of this body had an unnatural dirty appearance, was in the ventricles of the heart in a coagulated state.

C A S E II. (VII. 6.)

A PORTER, labouring under an acute fever, was affected with a very violent pain in his head, which
was

was succeeded by delirium. Soon after which he died.

Appearances on Dissection.

HEAD. A small quantity of serous fluid was found between the dura and pia mater; part of it, coagulated like transparent jelly, was seen among the sanguiferous vessels. In the sinus of the falx a long slender concretion was observed. The whole brain had the natural appearance.

C A S E III. (XLIX. 12.)

A MAN, aged forty years, was received into the hospital of Bologna, in consequence of a wound in the tibia occasioned by a blow with a bludgeon. When his wound had assumed a favourable appearance, and he himself was in good health, he was suddenly affected with an acute fever; which gradually increasing in violence, at last terminated in death.

Appearances on Dissection.

No uncommon appearance whatever was discovered, except that the blood retained nearly the natural vital fluidity.

C A S E IV. (I. 14.)

A WOMAN, who was previously affected with lues venerea, having been seized with fever, at-

tended with excruciating pains in the head, and delirium, died in the hospital of Padua.

Appearances on Dissection.

HEAD. The skull internally appeared in some places of a blackish red colour. That portion of the dura mater next the superior middle part of the right lateral sinus was much thickened; and it coalesced perfectly with the pia mater, and also with the substance of the brain. The meninges and brain in that part were almost semiputrid, and tainted with a dirty colour of a yellowish cineritious hue: this colour was most conspicuous in the cortical substance of the brain. When the cerebellum was drawn out from the hollow formed by the dura mater, its external surface was so closely connected to the dura and pia mater that part of it adhered to them; but the adhesion did not exceed in extent two fingers breadth, and therefore it was not so considerable as in the cerebrum. The sinuses of the dura mater, and the vessels of the pia mater, which were larger than usual, were distended with black blood. The sanguiferous vessels, in many places throughout the medullary substance of the brain, appeared to be very numerous, and were more distinct than they commonly are. The lateral ventricles were filled with a fluid of a brown colour, and their surfaces were tinged with the same colour. The pineal gland was firmer, larger, and whiter than usual, and seemed

ed to contain a kind of cells. This woman had a peculiarity in the form of her skull which deserves notice; the right side projected more outwards at the posterior part than the left, and consequently the cavity of that side, and the hemisphere of the brain contained in it, were larger than those of the left side.

C A S E V. (XIV. 5.)

A YOUNG man affected with fever was received into the hospital of Bologna. He had, it appeared, an old fistula above the right mastoid process. Injections thrown into it returned partly by the neighbouring ear, with which nevertheless he heard. The fever having increased in violence, within a few days after his admission he became delirious and comatose; and in that state died.

Appearances on Dissection.

HEAD. All the vessels of the brain were turgid. There was a considerable quantity of greenish fluid in the lateral ventricles; and from that contained in the right ventricle some pus of a greenish colour subsided. A much greater quantity of the same kind of pus was observed between the dura mater and the internal and inferior surface of the petrous process of the right temporal bone; and thus passing between both it extended into the vertebral tube. The cavity of the tym-

panum was also filled with the same kind of matter. That surface of the petrous process, on which are placed the Fallopian duct and the semicircular canals, was so much eroded, that a pretty wide cleft appeared on the posterior side of the foramen, through which both portions of the auditory nerves pass. That cleft was covered with the dura mater, which there seemed to be also eroded, but not to such an extent as the cleft itself. Although the brain had a proper degree of firmness, and was examined the day after death, the smell was so offensively putrid that it was not possible to trace the passage of the matter from the cleft to the right ventricle, nor yet to ascertain whether any other parts within the ear besides the tympanum were injured.

C A S E VI. (XXI. 9.)

A HUSBANDMAN, aged thirty five years, having fallen from a great height, and bruised his right side, was received into the hospital of Padua. This man, after he had recovered so completely that he was about to be dismissed from the hospital, having by stealth crammed himself with bread and some other indigestible aliment, was suddenly affected with violent fever, to which difficulty of breathing soon after succeeded. There was, however, no pain in the chest. Although those remedies

dies which the disorder seemed to require were employed, especially blood-letting once or twice, all was to no purpose ; for he died in eight days after the attack. During the latter days of his life, he lay on his back, was affected with a stertor in his breathing, and had a very frequent, for some time full, and latterly, cord-like pulse.

Appearances on Dissection.

ABDOMEN. The large intestines were particularly conspicuous, being much distended with air. The lower parts of the ileum were to a considerable extent of a blackish red colour ; the blood vessels being as distinct as if they had been filled with coloured wax. There was also a strong smell from the parts, such as is commonly felt in inflamed intestines. The liver was externally of a whitish colour, with livid edges ; internally, it was variegated like marble. The gall-bladder contained a small quantity of bile only ; and the bile was not perfectly natural. The spleen was large, whitish, and very flabby.

THORAX. The lungs adhered every where to the pleura, not only by means of membranes, but apparently also immediately by themselves. When however this was examined more accurately, it was found that a thin yellow concretion, resembling a membrane was interposed between the membrane of the lungs (which was found) and the pleura. When the lungs were drawn forward,
both

both that concretion and the pleura itself followed. The inferior portion of the left lobe was very large, heavy, much indurated, and resembled the substance of the liver. The other parts of the lungs were not unsound. The pericardium contained a quantity of yellowish turbid fluid. Polypous concretions were found in the large vessels and auricles of the heart. The largest of these concretions was observed in the right auricle; its branches extended from thence into the jugular veins.

C A S E VII. (LV. II.)

A PORTER, of a tall stature, robust, although pale in the face, and of a lean habit of body, aged about forty years, addicted to drinking, had been affected with scabies, for which he had taken sulphur mixed with wine. After having continued for six months in apparent good health, he was seized with fever, and brought into the hospital of Bologna.

On the first day, the state of the pulse and the other symptoms were not very bad; but his situation was rendered doubtful by a certain anxiety and restlessness. On that day a medicine was given with a view to cleanse out gently the stomach and bowels. On the day following, he was affected with vomiting and difficulty of respiration, and
was

was convulsed in his whole body ; he was besides violently delirious, and in his delirium cried out that his belly was on fire. Under these circumstances he died, on the third day after his admission into the hospital.

Appearances on Dissection.

ABDOMEN. The fat (which was not in large quantity) contained in the omentum, in the pinguedinous appendiculæ of the colon, and especially in those that were near the spleen, and also in the adipose membrane of the left kidney, was of a brown and livid colour. The colon was distended to three times its usual size by the contained air. The stomach was contracted, was of a brown colour externally ; and internally, at that part which is next the spleen, was inflamed, without any erosion, to the extent of an hand-breadth. The lower part of the liver was of a livid blackish colour, but the appearance was quite superficial.

THORAX. The lungs, the heart, and the diaphragm, were found in a natural state. The ventricles contained some polypous concretions.

C A S E VIII. (XLIX. 14.)

A NOBLEMAN, aged about forty years, who when in health was subject to such constipation of the bowels as required the constant use of purgative medicines, removed his habitation from his native country

country, the air of which was pure, to a situation where the atmosphere was dense. Soon after this he was affected with fever, marked by no other symptom than a continual anxiety of mind and constant state of watching. On the fourteenth day pain in the head supervened; and his pulse became so irregular that it could only be felt now and then. In this situation he died.

Appearances on Dissection.

ABDOMEN. The fundus of the stomach was tinged with a black colour. The intestines, and especially the large ones, were contracted. The other abdominal viscera were found. All the blood was strongly coagulated.

C A S E IX. (IV. 6.)

A MAN of a slender make, about forty years of age, became affected with acute fever. During the night of about the ninth day, he lost the faculty of speech. When spoken to, he showed no sign of understanding what was said. A slight power only of moving and feeling remained in all his limbs. His face was not red. About the thirtieth day he died.

Appearances on Dissection.

HEAD. Some serous fluid was found effused between the meninges of the brain; the ventricles

were full of a similar fluid. Every thing else was natural.

C A S E X. (v. 2.)

A MAN, aged thirty-three years, of a sanguineous temperament, of a lean habit of body, affected with hernia, and much addicted to the use of wine and tobacco, began to complain of pain in the left side of his head, particularly about the occiput, which was followed by a pain and weakness of the muscles of the neck on the same side. These symptoms were accompanied with fever, which was at first violent, but afterwards seemed to remit. His pulse became not only slow, but also weak, affording little resistance to the fingers; and at the same time, his strength began to fail, so that every motion of his body now became difficult. After interrupted delirium, he lost the power of speech, and of motion; and at last, sinking gradually, he died on the fourteenth day of the disease.

Appearances on Dissection.

ABDOMEN. The intestines within the scrotum forming the hernia, were so strongly connected by surrounding membranes to the testicle, that they could not be replaced.

HEAD. When the brain was taken out of the skull, a little purulent matter was observed at its

basis; and when that was wiped away, on handling the brain more matter appeared. This proceeded from the ventricles through the infundibulum; for both left and right ventricle, but more especially the latter, contained a considerable quantity of that matter. There was a foramen in the corpus striatum of that ventricle, which communicated with a sinuous ulcer occupying the third part of the substance constituting the basis of the brain on the right side. No morbid appearance occurred in the left side of the brain.

C A S E XI. (VII. 2.)

A YOUNG man, about twenty years of age, who had a flow fever, attended with thirst, was admitted into the hospital of Bologna. As the appearance of his urine, and the state of his pulse, were in some measure similar to those of persons in health, the disease seemed slight. About the eighth day, however, violent delirium supervened, which continued for seven days. The delirium having abated, he remained in a state of imbecility, except that at some times his recollection returned. At last he died.

Appearances on Dissection.

EXTERNALLY. The body approached somewhat to a livid appearance, especially under the nails of

of the fingers ; and the muscular flesh was rather of a brownish than of the natural red colour.

THORAX. All the viscera were found ; there, however, was no appearance of fluid in the pericardium.

HEAD. A gelatinous concretion was observed furrounding the sanguiferous vessels which creep through the pia mater. That membrane, at the basis of the skull, being torn, a quantity of fluid, which in colour and consistence resembled cow-milk whey, flowed out. The whole brain was found. The blood in this body was of a black colour, and was thick, but still fluid.

C A S E XII. (VII. 4.)

A MAN, aged thirty-five years, became affected with pain in the thorax, accompanied with fever. The pain having ceased, delirium supervened ; while the fever constantly increased in violence, and continued till death. This event took place on the eleventh day.

Appearances on Dissection.

THORAX. The posterior parts of the lungs were somewhat hard, and were of a red colour. A polypous concretion appeared in each ventricle of the heart ; the larger of which was in the left ventricle. This is an unusual circumstance, the larger being commonly found in the right.

HEAD. When the brain was taken out of the cranium, a little serous fluid was discharged from the meninges. A polypous concretion appeared in each of the large sinuses of the dura mater. The whole brain was soft. The plexus choroides of the left ventricle was very turgid, and, as it were, varicose.

C A S E XIII. (XVI. 6.)

A MAN, about forty years of age, after having laboured under a slow fever for many weeks, had a slight swelling of his feet, a tickling cough, and parched fauces. His respiration was short and difficult, and required that his neck should be erect. His pulse could be scarcely felt. He died suddenly.

Appearances on Dissection.

ABDOMEN. Although a watery fluid was discharged from the left side of the umbilical region, when the teguments of the abdomen were in the course of dissection separated from the muscles; yet every thing in that cavity was in a natural state, except the spleen, which was three times larger than usual.

THORAX. A limpid serous fluid was found stagnating in each side of the chest. This being put into a glass vessel, deposited at the bottom of the vessel some matter in separate portions, so that it had

had no continued membranous substance floating in it, as serum in the thorax generally has. The lungs were sound, and entirely free, except that the lower part of the left lobe was connected to the pleura by a short and slender membranous band. The pericardium was dilated, and contained more than half a pound of limpid serous fluid. The heart was large, and in its right ventricle especially, a flaccid polypous concretion was seen, a circumstance which is rare in cases where water is found stagnating in the cavities. The thoracic duct, and also the lymphatics in the abdomen, were so empty, that not the least vestige of them could be traced.

C A S E XIV. (XXI. 15.)

AN old man, aged ninety, who had been for some time in the hospital at Padua on account of a contusion on his thigh, became, without any apparent cause, affected with slight fever. No remarkable symptoms occurred. His pulse was quick and weak, but never intermitting. Within a few days he gradually sunk.

Appearances on Dissection.

ABDOMEN. The aorta and iliacs had here and there bony scales. The orifice of the pylorus was furnished with what is called its valve at one part only. In all the remaining part, which was by
much.

much the largest portion, there was no vestige of that kind, and no appearance of its ever having existed. The orifice too was much larger than usual. In the substance of the left kidney there were cavities in two places; in one the cavity was small, in the other large. These cavities contained a watery fluid included within the proper coat of the kidney, which was extended over the upper part. The urinary bladder, found in other respects, grew out at the left side above the insertion of the ureters into a cell composed of its own coats, of a hemispherical figure and of a moderate size. It had, by a small opening, a communication with this cell. In the scrotum a hernia was observed, which seemed to have formerly contained a portion of the intestinal canal, or at least a larger portion of the omentum than it then held. It was a pretty large sac, descending almost as far as the testicle from the ring of the oblique muscle on the right side between the membrane attached to the cremaster muscle and the tunica vaginalis, which was apparently found. This sac lay on the inside of the spermatic vessels. It was formed by the peritoneum having fallen down through an orifice capable of admitting the finger, and then having become dilated and thickened. A small and slender fold of the omentum had passed through that orifice into the sac, and adhered firmly to its parietes.

THORAX. A small quantity of red coloured watery fluid was found in each side of the thorax; the left lobe of the lungs was connected at some places to the pleura, which was perfectly sound; but the right lobe had almost no adhesions. This latter lobe, however, at the lower part, was swelled and indurated from inflammation. Almost the whole anterior surface of the heart was covered with fat, although the man was in other respects lean. The valves, at the orifices of the right ventricle, were not only neither rigid nor thickened; but even appeared, as did also those that belong to the pulmonary artery, to be composed of rather a thinner membrane than usual. In the left ventricle, however, the mitral valves were thicker than ordinary; and besides, the semilunar were entirely bony and inflexible. Internally they protuberated so, that they were at a distance from the parietes of the artery. They also grew out into a small thick body in the middle of their border. The aorta from the heart, as far as that part where it adheres to the vertebræ, as well as the carotids and subclavians, exhibited no bony scales; although such scales were evident to the touch throughout the remaining course of the aorta within the thorax.

C A S E XV. (VI. 4.)

A WOMAN of about twenty five years of age became affected with malignant fever, attended from the beginning with deafness. On the seventeenth day coma supervened, so that, when spoken to, she neither answered, nor opened her eyes. In this situation she died.

Appearances on Dissection.

HEAD. The brain appeared to be quite sound in every respect, except that, when it was taken out of the skull to be examined, a small quantity of serous fluid was discharged through the infundibulum. In the cavity of the tympanum of the ear, and in the neighbouring sinuses, some sanious matter was found.

II. TYPHUS GRAVIOR.

C A S E I. (X. 5.)

AN unmarried woman, aged twenty six years, affected with acute fever, was about the seventh day seized with convulsions, so that when spoken to she laughed in that convulsive manner stiled risus sardonius. The convulsions were attended with delirium, and were so violent, that it was necessary to tie her in bed that she might not fall out. All

these symptoms ceased an hour before her death, which happened on the ninth day. Her respiration had become more and more difficult.

Appearances on Dissection.

EXTERNALLY. A little serum had flowed out from the right ear.

THORAX. In the right side of the chest, the lungs adhered to the sternum, and laterally to the ribs; and externally, on that part of them next the clavicle, a certain substance of an intermediate nature between fat and a gelatinous concretion, such as sometimes floats on the fluid of dropfical patients, was found. This circumstance rendered it probable that this woman had laboured under some disorder of the thorax previous to that disease which had proved fatal. Eight or nine ounces of serous fluid were found effused within the cavity of the thorax on the same side. Polypous concretions like mucus were observed in each ventricle of the heart; that in the right ventricle was the largest.

HEAD. The whole brain appeared sound; and nothing remarkable occurred within the cranium, except that when the dura mater was in some places torn, in separating it from the skull, some drops of serum flowed out; and blood much diluted with serum was discharged from some very minute vessels which were accidentally lacerated.

C A S E XXI. (XXXI. 2.)

A YOUNG man who, during the whole course of his life, even in the best health, had his bowels in a loose state, having reached his twentieth year, became affected with gripes in his belly, attended with frequent bloody stools, or in other words had dysentery. After twelve or fifteen days, his disease was converted into a simple diarrhœa, with stools of a yellow colour, and unaccompanied with gripes. When, by means of proper medicines the diarrhœa had become somewhat alleviated, he was seized with a tertian fever, from which within a month he was relieved. The diarrhœa having still continued, he was suddenly attacked with acute fever, that had frequent exacerbations. His pulse was soft, small, weak, and quick. To these symptoms confusion of mind, and a peculiar swelling of the anterior part of the left side of the thorax, supervened. Thus affected, he died, about the fourteenth day from the beginning of the acute disease.

Appearances on Dissection.

ABDOMEN. Although the belly did not seem in the smallest degree swelled, it contained a great quantity of sanious ichor that had proceeded from the intestinal canal, a certain portion of which was perforated in several places. That portion
comprehended

comprehended the extremity of the ileum, and also the contiguous part of the colon, to the length of two hands breadth. The canal was there eroded, ulcerated, and on its internal surface, gangrenous, so that the perforations were not to be wondered at. Near this diseased part of the intestines some of the glands of the mesentery had grown out into a tumour, containing ichor not unlike that found in the cavity of the belly. The substance of that tumour was soft and flabby, and appeared approaching towards a state of putrefaction. The spleen was three times larger than natural.

THORAX. When the skin and muscles of the thorax, covering the swelling formerly mentioned, were cut into, a large quantity of serous fluid was discharged, especially at the side of the upper part of the sternum; for there serum ran out in streams from the borders of the pectoral and subclavian muscles. The lungs were found. The pericardium contained serum, like water in which fresh meat had been washed. The heart was so soft and flabby, that, when felt with the fingers, it seemed to be membranous rather than muscular. In the ventricles fluid blood, which was so frothy that it might have been compared to soap suds, was found. In all the veins there was such a quantity of air, that, although they had very little blood in them, they were excessively distended. This was more especially the case with one large

branch of the veins which belong to the spleen ; for, although it appeared as if it could not be dilated to a greater extent, scarcely any vestige of blood could be traced in it.

HEAD. . A small quantity of serous fluid appeared within the cranium ; but the brain itself exhibited no marks of disease.

C A S E III. (XLIX. 24.)

A WOMAN, aged fifty years, affected with malignant fever, was admitted into the hospital of Padua. Her pulse during the first six days was small and indistinct, but afterwards became somewhat more perceptible. A sensation of considerable straitness of the breast during respiration, together with palpitation of the heart, having supervened, she died within the space of two days.

Appearances on Dissection.

THORAX. The blood in the left ventricle of the heart was half coagulated. In the right ventricle, which it distended, it formed a polypous concretion, apparently of a fleshy consistence ; but nevertheless so tenacious, that it resisted the knife as much as the most viscid crust found on the blood of pleuritic patients usually does.

III. MIXED FEVER.

C A S E I. (XLIX. 6.)

A WOMAN, aged thirty years, of a bilious temperament, who had for a considerable time laboured under a double tertian fever, received a blow upon the abdomen with a stick. Having been admitted into the hospital of Padua, she complained only of pain in the abdomen; but on the third day after the blow she began to be delirious. Her pulse was small, and quick; and she vomited more than once a fluid resembling water in which fresh meat had been washed. At length, the disease having increased every day, she died.

Appearances on Dissection.

ABDOMEN. The muscles were found to be contused; in such a manner, nevertheless, that no marks of contusion appeared, neither on the outside nor on the inside of the belly. The liver was of a whitish colour, and somewhat harder than usual. The gall-bladder was of a very large size; and contained about three ounces of bile of a black colour. Some of the same kind of bile was found in the stomach. Every thing else within the abdomen was strictly natural.

THORAX. The lungs, on the surface which was
turned

turned towards the vertebræ, were considerably inflamed; but in other respects sound. The right ventricle of the heart contained a small polypous concretion.

C A S E II. (XVI. 17.)

A GIRL of about fifteen years of age was affected with acute fever, attended principally with a violent pain in the head, for the other symptoms were mild. The fever seemed to remit about the tenth day. Within a few days, however, great thirst, laborious respiration, and pain in the left side of the thorax, supervened to the fever. These two latter symptoms having continued to increase in violence, her speech and understanding being unimpaired, she died within a few days, contrary to the expectation of those who attended her.

Appearances on Dissection.

THORAX. The lungs were sound; but the left cavity of the chest was filled with fluid not very unlike the urine of horses: in this some concretions, resembling the white of an egg, floated. There was also a very small quantity of serous fluid in the right side of the chest. The pericardium was completely filled with a fluid of a thicker consistence than that in the thorax; and as the external surface of the heart was slightly eroded,

it

it was probable that it had been so eroded by the same fluid. Polypous concretions, somewhat like condensed mucus, appeared in the ventricles of the heart. That in the left ventricle was the larger.

C A S E III. (XXIV. 6.)

AN old man who had been for three months in the hospital of Bologna on account of a fractured leg, was detained there from a slight, though obstinate fever. At last it was unexpectedly discovered that he had no pulse, although it had not hitherto intermitted, and although the man asserted that he did not feel himself worse than usual at that time. With a view to confirm what he said, he immediately raised himself up, and sat erect in bed. In a short time, however, he died.

Appearances on Dissection.

ABDOMEN. One of the kidneys contained under its proper coat a cell, of the size of a small bean, filled with serum. Granules, as if of tobacco, appeared at the sides of the feminal caruncle. Within the pendulous part of the urethra only one of the lacunæ, and that a small one, was observed.

THORAX. There was no dilatation in any part of the thoracic viscera or large vessels; although the aorta exhibited, near its valves and in other
places,

places, marks indicating future ossification ; and although it had a small bony lamella within its internal coat at that part where, after having sent off the left subclavian, it began to descend. Polypous concretions were here and there seen in the ventricles of the heart, especially the right one, and in the large blood vessels. One of these was of a white colour ; and of so firm a texture, that it gave great resistance when an attempt was made to pull it in pieces.

HEAD. Although no watery fluid flowed out from the vertebral tube when the upper cervical vertebræ were separated from the lower, a considerable quantity was discharged during the opening of the head, and the lateral ventricles contained not a little. The substance of the brain was not flabby, but was even perhaps the hardest that was ever felt. The blood vessels, so far from being pale, were most of them (especially the sinuses) filled with black blood. Although the weather was cold, and it was scarcely three days since the death of the subject, and although there were no marks of putrefaction in any part of the body, air bubbles were seen in those two arteries which pass between the hemispheres of the brain, near the superior surface of the corpus callosum. A considerable portion of the parietes of the right carotid artery, near the cavernous sinus, had become thickened, and of an intermediate nature
2 between

between ligament and cartilage; yet on its internal surface it was even membranous. A similar morbid appearance seemed begun in other large vessels of the brain. On the outside of the cranium that diseased state of the vessels was much more considerable; for on one side of the neck a pretty large bony scale was found between the coats of the carotid, just at its division, and the whole trunk of that artery was very much dilated. The other carotid was of the natural dimensions.

C A S E IV. (XXXVI. 23.)

A WOOL-COMBER, of about forty years of age, came into the hospital at Padua, on account (as he himself said) of obstructions in the hypochondria. The bad colour of his face; the bad health he had suffered for a whole year; the irregular fever with which he was often troubled, and which was not absent at that time; and more especially the examination of both hypochondria, particularly the right one, confirmed what he had said. When he seemed to have received some benefit from the use of the medicines prescribed, he became unexpectedly affected with acute fever, accompanied with symptoms of internal inflammation of the thorax; and within ten or twelve days died.

Appearances on Dissection.

ABDOMEN. Although the weather was cold, and it was not yet two days since the death of the subject, the abdominal muscles were flabby, and at the lower part were of a greenish colour. The liver was uncommonly large; and, although externally its colour did not appear bad, internally it was of a pale brown colour: besides, when accurately examined, the whole of it both internally and externally was marked with certain brown spots, and was harder than usual; a circumstance which was ascertained both by the fingers and by the knife, as it was cut into in various directions and in different places. It was observed that no yellow point appeared from the sections of any of the veins in cutting into the liver, which is the usual mark of the hepatic ducts being also cut into. The gall-bladder was small in proportion to the size of the liver, and contained a little bile of a colour approaching to that of ashes, so that it was uncertain whether the hepatic ducts had become collapsed from the small quantity of bile in the gall-bladder, or if that pale colour of the bile itself had prevented the appearance of the above-mentioned mark of those vessels having been cut through. The spleen, in all its dimensions, was double the natural size; but in other respects was sound. The splenic artery, from its origin to its termination, was no where tortuous, or so to speak, varicose as usual,

usual, except in one place, about the middle of its course, where it was somewhat inflected. A hard body, of the bulk and almost of the figure of a middle sized cherry, but with an unequal granulated surface, of an intermediate nature between bone and stone, had grown on the mesentery. Close by one side of this body, an arterial and venous branch passed, but did not enter its substance, and from thence proceeded to the intestines, which lay at the distance of about two fingers breadth from that body. The ileum, at the side next the mesentery, was in one part so inflected as to form an angle, which continued even after the mesentery was cut off; and, at the same place on the opposite side, grew out into a short appendix of an hemispherical form. The left external iliac vein, near the opening of the internal one, was hard but not osseous; for the coats had at that part for a short tract become thickened only. These coats being opened, small chords, and some smaller substances like valves, appeared in the cavity of the vein on one side where it was not perforated by any orifices. The kidneys were about nine inches in length; but were proportionally narrow, except at the superior extremity, where they were a little broader. The length of the sinuses that receive and transmit the vessels was also uncommon, which was the more readily observed, as all that part of the substance of the kidneys that should have

made the anterior paries of the sinuses was wanting. The larger of those branches which convey the urine into the pelvis of the kidney were therefore wholly exposed, as were also the sanguiferous vessels in all that part generally concealed within the sinus. Two arteries, the one superior and the other inferior, and as many veins, belonged to each kidney. The veins went out of the sinuses in such a manner that the inferior one ascended in an oblique direction into the superior, which was placed transversely. The arteries, however, formed no junction with each other; both the inferior and superior extended transversely, without any obliquity; and, consequently, the inferior did not enter the sinus, but passed below it almost at the lower side of the kidney. Both the inferior arteries had their origin much lower than the renal arteries usually have, as they proceeded from the aorta, at the distance of scarcely an inch above its division into the iliacs; besides, they did not come out from the sides of that vessel, but from the very middle of its anterior surface, and were so near to each other that their orifices were separated by a very thin septum only. From that part of the aorta, they proceeded on each side, both of them being similar, and without having any ramifications before their insertion; and were distributed over the kidneys in the manner already described. The superior arteries, on the other hand, which
were

were somewhat thicker than the inferior ones, differed neither in their origin nor ramifications from the real natural renal arteries.

THORAX. The right lobe of the lungs adhered to the pleura, and was indurated. Some spoonsful of bloody watery fluid were found in the pericardium. Two veins, which ran longitudinally upon the posterior surface of the heart were turgid with blood, and as it were varicose.

C A S E V. (XVI. 38.)

A COUNTRY woman, not above twenty-five years of age, of a pale countenance, who had been married for about four months, and who was three months pregnant, having become affected with a slight irregular fever, was admitted into the hospital of Padua, where she lay for a month or more. Her pulse was neither small nor intermitting, although she almost lived entirely upon fruit; which was not to be wondered at, considering she was pregnant. She had no thirst. She had no swelling in the feet; nor was she affected with faintings. She never complained of any straitness or uneasiness about the præcordia, nor of any sensation of weight, nor of any other uneasy symptoms in the thorax, except a slight dry cough, to which she had been occasionally for a long time habitually subject. Although her respiration became difficult
if

if she swallowed any thing warm, and for that reason she begged to have every thing cold, yet she had in other respects no trouble in breathing; for during the night she never had any sense of suffocation, nor was ever obliged to sit up in bed on account of her breathing. She lay on her right side. In this position, although no symptom had supervened to the slight fever, except a pain in the loins, of which she had complained in the very last days of her life only, she died.

Appearances on Dissection.

ABDOMEN. The belly was opened within half an hour after the death of the mother, with a view, according to the custom of the country, to baptise the child if it were alive. This object was accomplished; for, on cautiously cutting through the uterus and membranes, the infant rushed out, as it were, and moved its hands. It did not cease to live till an hour after the death of the mother. The spleen was a little larger than natural. The liver was much more so; as it extended both lower down than ordinary, and also across quite to the spleen. Externally it was of a pale colour; and internally it appeared variegated with its own proper colour and that of tobacco. The stomach, almost in the middle of its length, was contracted, and at each extremity was swelled, but in a less degree at the right side, which part descended in an oblique direction. The other extremity was
placed

placed transversely, with its fundus turned somewhat anteriorly ; and was half full of air and fluid. A great number of lumbrici appeared in the small intestines ; and wherever they were, but especially in one place, the intestines were of a red colour, and protuberated as if forced outwards by violent means.

THORAX. Before the thorax was opened the neck was observed to be swelled, from the turgescence of the thyroid gland ; and it was found that milk could be easily pressed out from the breasts. In the right cavity of the thorax there was a great quantity of yellowish watery fluid ; in which some thick mucus, and as it were membranous substances, appeared. Some of the same kind of fluid was found also in the left side ; and there was so much of it in the pericardium, that it was almost completely filled with it. In it too the same membranous substances were seen. Polypous concretions, formed of a kind of mucus, were found in each ventricle of the heart ; those in the left ventricle were a little thicker than those in the right. A very small quantity of fluid appeared at the extreme parts of the feet ; although no marks of it had been perceived, neither during life nor before dissection. The muscles all over the body were in the most natural state.

C A S E V. (XXI. 6.)

A MASON, aged about thirty years, became affected with fever, in consequence of fatigue in working. To this periodical daily rigors supervened; and soon after he began to be delirious during the time of the rigors. At length the delirium, which used to go off immediately after the rigors, continued constantly; and from that time he grew worse and worse. The delirium was of the melancholy and plaintive kind. His pulse was not irregular. Blood was sometimes discharged from the nostrils. Although venesection was had recourse to even three times, and other modes of cure which seemed necessary were employed; yet, as he continued always to grow worse, he gradually at last died.

Appearances on Dissection.

ABDOMEN. The spleen was large.

THORAX. The lungs, except at their anterior part, which was of a whitish colour and in a sound state, were almost every where harder than natural. The right lobe, especially at the upper part, was exceedingly indurated, very heavy, distended, of a red colour, and composed of a strong thick substance. Although the body was not opened till nine hours after death, all the viscera were still warm and smoking; and the blood which flowed from

from their veins when divided, was fluid and warm. Polypous concretions nevertheless were drawn out, not only from the crural veins, but also from the heart, from whence they extended to the pulmonary vessels of one side at least.

CAUSES OF CONTINUED NERVOUS FEVER.

PREDISPONENT CAUSE. Many facts concur to prove, that a certain state of the system is required for the action of the exciting cause or causes of this fever. The particular nature, however, of that state, has not hitherto been ascertained. That it depends upon the condition of the nervous system, there is every reason to believe; but our ignorance of the laws by which that system is regulated, prevents us from approaching nearer to a solution of the question. Persons of all ages, and of both sexes, are subject to the disease. While some appear wonderfully susceptible of it; others, though constantly exposed to the exciting causes, are not affected by them: thus, for example, medical practitioners and nurse-tenders are seldom infected with fever; and criminals from a jail have been known to communicate contagion to numerous persons in a crowded court, although they themselves were in good health.

EXCITING CAUSES. The variety of circumstances which have been commonly regarded as exciting causes of nervous fever, has tended much to perplex those who have attempted to investigate the nature of this species of fever. Exposure to cold, as it is termed; disorders in the primæ viæ; intemperance; violent passions of the mind; fatigue of mind or body; corrupted animal exhalations; exhalations from the putrefaction of vegetables; a particular state of the atmosphere, from the vicissitude of seasons, or the succession of weather; confined human effluvia; and contagion, have been enumerated as the exciting causes.

1. *Exposure to Cold.* This has been reckoned by the common bulk of mankind as a frequent exciting cause of fever; a circumstance to which perhaps may be attributed its being ranked as such by medical practitioners. It may be thought presumptuous to call in question an opinion, founded upon observation, which is so generally received. When, however, it is recollected, that exposure to cold produces synocha, or inflammatory fever, which is a disease very opposite in its nature to typhus, as has been already proved; and that, besides, it frequently induces catarrh, rheumatism, bowel complaints, &c. it must be obvious, that some additional circumstance at least must concur

concur before it can excite nervous fever. And if it be allowed that the former effects certainly do occur much more frequently than the latter has been supposed to do, it may probably appear, that exposure to cold ought to be expunged from the list of exciting causes of the disease under consideration.

2. *Disorders in the Primæ Viæ.* These are more probably the consequences than the causes of fever: for a disordered state of the stomach and bowels frequently takes place, without being attended with nervous fever; whereas that species of fever, unaccompanied with derangement of those viscera, never occurs. This cause, however, deserves great attention; for the state of the stomach and its connections has certainly a remarkable influence over the whole system. That the ordinary functions of the stomach are not only deranged, but even totally suspended, in nervous fever, is more than probable. Dr. Fordyce, for example, mentions that he has often seen cases where food, taken before the attack of fever, had remained in the stomach for three or four days *. But whether an impaired, deranged, or suspended state of its ordinary functions, be the only morbid change that happens in the stomach during fever,

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* See A Dissertation on Simple Fever, by George Fordyce, M.D. page 66.

ver, is a question which cannot be easily determined. From the circumstance already mentioned, that disorders in the primæ viæ, impeding the functions of digestion, frequently occur independent of fever, it appears that some change not yet explained certainly happens; and it is upon this supposition that the author of these remarks rejects disorders of the primæ viæ as an exciting cause of nervous fever.

3. *Intemperance.* The many instances which are observed where intemperance of diet is not succeeded by nervous fever, render it more than probable that, in those few cases where it is so, some other cause concurs. The immediate morbid effect of intemperance, when it appears under the form of fever, seems to be synocha, and not typhus.

4. *Violent Passions of the Mind, and Fatigue.* Although fear, grief, and fatigue of mind and body, have been long considered as exciting causes of nervous fever*; there is reason to believe that they rather contribute to produce the state of the system which predisposes to that disease. Where violent passion, such as excessive anger, is immediately followed by fever, it is probable

* A very late author is of the same opinion; vide Dr. Currie's Account of the Climate and Diseases of the United States of America, page 122.

probable that the disease produced is synocha. The depressing passions, such as fear, &c. which sometimes occur about the first attack of fever, are perhaps the effects of the peculiar state of the system that had taken place at that time.

5. *Corrupted Animal Exhalations.* The exhalations from marshes generally proceed from the putrefaction both of animal and vegetable matter, yet they induce intermittent fevers only. With respect to the effects of exhalations from putrid animal matter alone, nothing certain can be urged; but, upon the whole, it appears more probable that they contribute to render the effects of some other exciting cause more violent, than that they are themselves exciting causes.

6. *Exhalations from Putrefaction of Vegetables.* Dr Rush * has adduced the most unequivocal proof that, on some occasions, vegetables in a state of putrefaction act as exciting causes of malignant fevers.

By the daily observation of mankind, however, it is clearly established, that this is neither a general nor a common effect of vegetable putrefaction; and, consequently, where it does take place, there must be some concurrence or combination of other circumstances not yet perfectly ascertained. The heat

* Vide Dr. Rush's Account of the Yellow Fever, already referred to, p. 153. et seq.

heat of the climate seems obviously indeed to contribute much to this effect; but it is probably not the sole circumstance.

7. *A particular State of the Atmosphere, from the Vicissitudes of Seasons, or Succession of Weather.*

The numerous histories of epidemics on record * have induced many practitioners to believe, that a particular state of the atmosphere sometimes proves the exciting cause of continued nervous fever. This opinion, however, seems founded on partial observation only; for it is more consistent with facts, to suppose that a particular state of the atmosphere only tends to render the system more susceptible of the impression of exciting causes. Thus, for example, we are told, that under the same atmosphere two diseases of a different nature prevailed universally at the same time †.

8. *Confined Human Effluvia.* That these excite fever there can be no doubt; the most incontestible

* Vide, Willis opera. Sydenham opera, passim. Morton opera. Halleri Disputationes, vol. v. Mertens Observationes Medicæ de Febribus Putridis, passim. Cleghorn's Observations on the Epidemical Diseases of Minorca. Mosely on Tropical Diseases, page 122. Collection d' Observations sur les Maladies et Constitutions Epidemiques, par M. Lepecque de la Cloture, pag. 836.

† Cleghorn on the Epidemical Diseases of Minorca, page 136. Lind on Diseases incident to Europeans in Hot Climates, p. 126.

contestible evidence of the fact has been adduced *.

9. *Contagion.* All the species of nervous fever are contagious ; a circumstance which forms the most essential mark of distinction between these fevers and all others. In many cases the contagion can be distinctly traced. In others, although it cannot be ascertained, there is no certainty that it did not exist ; for such is the nature of contagion, that it may be communicated not only from a diseased person to a healthy one, but also may be carried about the cloaths, &c. even of a healthy person. In a crowded city, therefore, it is impossible for any individual to be certain that he has not been exposed to contagion. Many practitioners allege that contagion is not a general exciting cause of nervous fever ; because it does not, like other contagions, as that of small pox, &c. lose the power of again infecting the same individual. But this argument is equally strong against the idea of fever being produced, in any instance, by infection ; a fact, however, which is too well established to be denied. There is no inconsistency

* “ At the Lent assizes in Taunton, 1730, some prisoners who were brought thither from Ivelchester goal infected the Court ; and Lord Chief Baron Pengelly, Sir James Sheppard, Serjeant, John Pigot, Esq. Sheriff, and some hundreds besides, died of the goal distemper.” See *The State of the Prisons in England and Wales*, by John Howard, F. R. S. p. 18.

cy in imagining, that the different species of contagion are regulated by different laws, as it is found that they produce different effects. With respect to the nature of the contagion of fever, nothing but conjecture can be offered; which is not surprising, since that of the contagion of small pox, although it can be made the object of our senses, which that of fever cannot, properly speaking, be, is still unknown. From the similitude of their effects, it is probable that it coincides, in some essential qualities, with human effluvia. Perhaps, also, the peculiar smell which proceeds from human effluvia, and from the bodies of those affected with nervous fever, being nearly of the same kind, affords an additional argument in favour of that conjecture.

Upon the whole, it is presumed, that human effluvia, putrid exhalations under certain circumstances, and contagion, are the sole exciting causes of continued nervous fever; and that exposure to cold, disorders in the primæ viæ, intemperance, violent passions of the mind, fatigue of mind or body, corrupted animal exhalations, and a particular state of the atmosphere from the vicissitude of seasons or the succession of weather, act only by inducing that state of the system which renders it susceptible of the impression of the exciting causes.

An investigation of the exciting causes of disease has been regarded as useful in two points of view:

First, In order that means may be suggested for the prevention of diseases; and *Secondly*, For the purpose of ascertaining the proximate cause. The first of these views alone, indeed, has been generally avowed; but the pains which most systematic writers have taken to explain the mode of action, or the effects of exciting causes, clearly show that they have been actuated by the second view also. If future observation shall establish the validity of an opinion lately proposed by Dr Fordyce, that a fever produced by any cause, like a body put in motion by an impulse, will continue, although that cause be no longer applied *; it will then appear necessary only to enquire into the existence of exciting causes, and not into their mode of operation. As Dr Fordyce has not yet produced the evidence on which his opinion is founded, it cannot be regarded as unfair, if assent be refused to the doctrine as applying generally to all fevers. It is a well known fact, for example, that intermittent fever often resists obstinately every means of cure, and yields only in consequence of a removal from exposure to the exciting cause.

PROXIMATE CAUSE. The modern opinions respecting the proximate cause of nervous continued fever may be arranged under five heads.

VOL. I.

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I. The

* Vide Fordyce's Dissertation on Simple Fever, page 171.

1. The introduction of a morbid matter into the system.

2. Lentor of the blood.

3. Impaired energy of the brain, with spasm of the extreme vessels.

4. Simple debility.

5. An over proportion or accumulation of carbon and hydrogen, and consequently a diminution of oxygen, and an exhausted state of irritability.

1. *The introduction of a morbid matter into the system.* This is a very old opinion, and, among the vulgar, a very common one. The principal modern authors who have adopted it are, Sydenham, and Dr Balfour. Dr Sydenham imagines that a materies febricalis is introduced into the blood; and that a commotion is therein excited, by which the matter is either separated and expelled, or the blood itself is changed into a new state *. Dr Balfour's opinion is, that the contagious matter being conveyed into the stomach and bowels, infects the mucus lining the intestines, which being absorbed and mixed with the blood produces the febrile state †.

Several

* Vide The Works of Dr Sydenham, translated by Dr Wallis, vol. i. chap. 4.

† See A Treatise on Putrid Intestinal Remitting Fevers, by Francis Balfour, M. D. p. 16. et seq.

Several strong objections, founded upon the progress and event of fevers, may be urged against this theory ; but these it is unnecessary to adduce : for, although the alleged alteration in the state of the blood were proved, the introduction of morbid matter into the system could be considered as an exciting cause of fever only, and not the proximate one. No change, however, of the blood, has hitherto been demonstrated as taking place invariably in every case of fever. On the contrary, numerous facts concur to render it more than probable, that, so far as our senses can determine, the only changes which blood undergoes, in fevers of this kind, are those which proceed from the action of the blood-vessels, and the deranged state of the chylopoetic viscera ; and hence such changes are the effects, and not the causes of fever.

2. *Lentor of the Blood.* This opinion, proposed originally by Boerhaave, has been already explained, page 25. The objections already urged against it, page 26, sufficiently evince its inconsistency with facts.

3. *Impaired Energy of the Brain, with Spasm of the extreme vessels.* This theory has been also already explained, page 26. That it is inadequate to the explanation of the phenomena of continued fever, is presumed from the two following circumstances.

1st, Continued fevers are not always preceded

by a cold fit, nor by the other symptoms regarded as denoting spasm of the extreme vessels. And,

2dly, The energy of the brain is not always restored on the cessation of the fever; for imbecillity of mind, which often continues for a considerable time, is the frequent consequence of that disease.

These objections to the doctrine of spasm are selected as being incontrovertible. Others, founded upon the inconsistency of the several parts or principles which constitute the theory, might have been urged.

4. *Simple Debility.* This theory scarcely requires a single argument to prove its insufficiency, to any one who considers for a single moment the morbid states of the human body. If the debility which occasions fever be a particular degree only in a supposed scale between ordinary health and the termination of life, then every dropical patient should be affected with fever: and if it be a particular species of debility; that is to say, debility attended with peculiar circumstances, then the theory is merely a play upon words.

5. *An over Proportion or Accumulation of Carbon and Hydrogen, and consequently a Diminution of Oxygen, and an exhausted State of Irritability.* This theory, founded upon the modern improvements in chemistry, has been lately proposed by Dr. Wood of Newcastle.

Newcastle*. He proceeds upon the supposition that a certain proportion of oxygen must necessarily be received during every inspiration into the system, and that when this does not happen, carbon and hydrogen gaining ascendancy, a putrescent state of the system takes place.

An insuperable objection occurs against this theory; viz. That the diminished proportion of oxygen must depend on some peculiarity of action of the system in the person affected. For, as all mankind have access to the same grand magazine of oxygen, the atmosphere; (to use Dr. Wood's own expression) no individual could be affected with fever, while others escaped, unless the reception of oxygen, or the modification or distribution of the air we breathe, did depend upon corporeal mechanism†. Allowing, therefore, what is by no means

* Thoughts on the Effects of the Application and Abstraction of Stimuli on the Human Body, by James Wood, M. D. &c. p. 60.

† Dr. Wood, in support of his theory, very properly adduces practical success in addition to hypothetical reasoning. Proceeding upon the principle, that the acid of nitre, combined with potash, taken into the stomach, communicates to the system the oxygen which it contains; he regards the invariable success that attended the administration of a solution of nitre in a great many cases of typhus, both under the care of his father and himself, as a complete demonstration of the infallibility of his principles. When, however, it is considered, that the solution (consisting of a drachm of nitre in eight ounces of water) was given in doses
of

means proved, that an accumulation of carbon and hydrogen, with the consequences stated, do actually happen in fever; they are to be regarded as effects, and not as causes.

UPON the whole, it is obvious, that none of the modern theories above enumerated afford a rational explanation of the proximate cause of continued fever; and it may be presumed that, from the complication of morbid symptoms which occurs in that disease, no such explanation can be given, until the laws, by which the nervous, the lymphatic, and the sanguiferous system are regulated, and the mutual dependence that each has upon the other, be better understood.

REMARKS ON THE CASES OF CONTINUED NERVOUS FEVER.

THE most general appearance on dissection observed in the preceding cases is, effusion within the cranium. Yet in two cases, viz. the fifteenth of typhus mitior, and the first of typhus gravior,

every

of an ounce or sometimes two ounces every two or three hours; it may be easily understood, by one acquainted with the elements only of chemistry, that before the half of the solution could be exhibited it must have lost all power of giving out oxygen.

every thing within that cavity was found : consequently the most general appearance seems to be an effect which does not invariably take place.

With respect to the different morbid appearances in the cavities of the thorax and abdomen, in the cases under consideration, they are to be regarded as accidental circumstances, only depending upon causes, to be afterwards explained.

SECT. II. *INTERMITTENT FEVERS.*

INTERMITTENT FEVERS * are those where a perfect remission takes place, for a longer or shorter time, between the paroxysms. Each paroxysm consists of a regular cold, hot, and sweating fit ; the phenomena of which are the following At first the patient complains of weakness, attended with yawning and stretching of his limbs ; followed

* For a description of intermittent fevers, see, Boerhaave's Aph. 749, 750, 751 ; and Van Swieten's Commentaries on these. Consp. Junckeri, pag. 651, et seq. Oosterdyk Prescripta Medicinæ, pag. 61. Cleghorn on the Diseases of Minorca, page 147. Sydenham, translated by Wallis, vol. i. page 75. An accurate description of the general symptoms of each paroxysm is given by Dr. Cullen, par. x. et seq.

ed by a certain sensation of uneasiness in the back and in the points of the fingers. These symptoms are succeeded by shivering, and a sense of great cold; although in fact the body is warmer than natural. Nausea, vomiting; pain of the limbs, of the back, and of the head; and difficult and anxious respiration, then take place. The pulse at the same time is quick, feeble, small, and wire-like; and can be scarcely reckoned on account of the tremors of the body. The urine is limpid. This stage lasts for one, two, or more hours.

The cold fit having gradually ceased, most intolerable heat is felt; the pulse becomes full, strong, and hard; the respiration less difficult, but still anxious. The tongue is white, attended with great thirst; and the sensation of excessive heat is felt about the præcordia. Headach, and sometimes delirium, supervene; and also pain, and in some cases swelling, about the region of the stomach. The nausea and vomiting often continue during this stage. The urine is of a red colour. Blood drawn during this stage is commonly thicker than usual; containing a small proportion of serum, and having a less firm cohesion of its particles than natural. In some cases the upper part of the crassamentum is red, and the under part black. After the hot fit has continued for one, two, or more hours, a copious sweat breaks out over the whole body. All the symptoms then become alleviated,

leviated, and after the sweat has lasted for three or four hours totally disappear. The urine deposits a sediment. Sleep takes place; and the intermission is completely established, a sense of weakness only remaining. After a certain interval, in some cases longer, in others shorter, the same phenomena again recur in the same succession.

Authors have divided intermittents into different species, according to the length of time interposed between the beginning of one paroxysm and that of another. Thus: where a regular fit of the disease takes place every twenty-four hours, it is named a Quotidian; if every forty-eight hours only, a Tertian; and if seventy-two hours intervene between the beginning of one fit and that of another, it is named a Quartan. Besides these, other divisions have been adopted, founded upon the irregularity of recurrence of the fits; as, the Semitertian, Double Tertian, Triple Tertian, &c. As intermittents occur most frequently during the Spring and Autumn, they have also been divided into Vernal and Autumnal; and it has been found that tertians and quotidians most frequently prevail in the former season, and quartans in the latter. Not contented with these divisions, authors have distinguished intermittents from each other according to the anomalous symptoms with which they are sometimes complicated. Accord-

ingly, as the disease is occasionally attended with violent fixed pain in the bowels, with faintings, with symptoms of apoplexy, or with pains in the liver, spleen, or kidneys; it has by different authors been styled, *Assides Syncopalis*, *Apoplectica*, *Hepatica*, *Splenetica*, *Nephralgica*, &c. These distinctions, however, seem to serve no useful purpose; tending rather embarrass than to instruct. It may be questioned too, how far the division, founded upon the intervals between the beginning of one paroxysm and that of another, is of practical utility; seeing, that during the course of the disease the intervals frequently become protracted or shortened: so that what was originally a quotidian shall degenerate into a tertian or quartan, and what was at first a tertian shall be converted into a quotidian. Sometimes too the paroxysms succeed each other so rapidly, that no regular intermission occurs; there being only a temporary alleviation of the symptoms, or remission as it has been called. Such cases have been named *Remittents*. For these reasons, it is impossible to ascertain, at the first attack of an intermittent, the exact form which it will assume: for although, as already stated, tertians and quotidians are most frequent during Spring, and quartans and remittents prevail principally during Autumn; and although when the fit begins at noon the disease most generally assumes the tertian form,

and

and when in the evening the quartan type, there are so many exceptions to those rules, that no dependence whatever can be placed upon them.

Intermittents are much more dangerous in warm climates than in temperate regions. In Great Britain the disease in many cases terminates spontaneously after a few fits, and leaves the patient nearly in a state of perfect health. In other cases it resists obstinately every remedy; and induces so great a degree of weakness throughout the whole system, that chronic diseases of an alarming nature, depending upon visceral obstructions, are induced. It often happens too, that, after the disease has continued obstinately for a considerable length of time, it ceases entirely upon the removal of the patient from the local situation or place of residence in which he had become affected with the disease; provided the change be made into what is called a dry atmosphere. In warm climates, on the contrary, not only do intermittents terminate in diseases which become rapidly fatal, as apoplexy, dysentery, &c. but often also do they prove immediately fatal. In some cases death takes place during the cold fit; but most generally it happens during the hot one. Where the patient is not carried off by the first attack, the fever becomes commonly irregular previous to its fatal termination. The favourable symptoms commonly enumerated are: *First*, Regularity in the sta-

ges of the fit; *Secondly*, The absence of violent pains in the bowels during the fits; *Thirdly*, The several stages of the fit not occupying above twelve hours; *Fourthly*, The patient being, with respect to the animal and natural functions, nearly in a state of health during the intermissions; *Fifthly*, The urine depositing a sediment; and *Sixthly*, The eruption of pustules about the lips on the apparent declension of the disease. The unfavourable symptoms, on the contrary, are: *First*, Irregularity in the periods of attack, and in the occurrence of the stages of the fit; *Secondly*, The fits becoming about the third or fourth period of the disease much protracted, the intermissions consequently being greatly shortened; *Thirdly*, Coma, delirium, great anxiety, painful swelling and induration about the hypochondria and epigastric region, pain about the upper orifice of the stomach or loins, occurring during the fits; *Fourthly*, The patient, during the intermissions, having a total aversion for food, and feeling such weakness, attended with vertigo, that he can scarcely walk; *Fifthly*, The frequent appearance of numerous blotches on the skin like the stinging of nettles; *Sixthly*, The urine continuing thin, clear, high coloured, or being covered with an ash-coloured membrane like a cobweb; *Seventhly*, Hæmorrhages from the nose, vomiting, colliquative sweats, or diarrhœa, taking place; and *Lastly*, The patient lying constantly

stantly on his back, with a ghastly countenance, eyes half shut, and mouth open; while at the same time the belly is swelled to an enormous size, and obstinate costiveness attends, or involuntary discharge of the feces happens *. Intermittents frequently terminate also in continued fevers.

The appearances on dissection, in those who die from this disease, according to Dr Cleghorn, who examined near one hundred bodies, exhibit constantly a blackness or total corruption of one or other of the adipose parts in the lower belly, as the omentum, mesentery, colon, &c. enlargement of the spleen; together with such a softness and rottenness of its substance, that it has more the appearance of coagulated blood wrapped up in a membrane, than of an organic part; the gall-bladder full and turgid; and the stomach and intestines overflowing with bilious matter. No extraordinary appearance was observed in the cavity of the thorax or head, except the effusion of yellow serum where the skin had been tinged with that colour.

CASES

* For a more particular account of the symptoms, by which a judgement can be formed of the probable event of intermittent fevers, see Dr. Cleghorn on the Diseases of Minorca, p. 167, et seq. from whose observations the above detail is chiefly borrowed.

CASES OF INTERMITTENT FEVER.

CASE I. (XXV. 4.)

A CLERGYMAN, aged sixty years, who had been troubled for about thirty years with weakness of the head and stomach, thirst, sudden faintings, especially when he was in the erect posture, together with a sense of straitness of his chest, and with an intermission of the pulse, became at last affected with a double tertian fever. The fever having grown every day more violent, at last terminated fatally.

Appearances on Dissection.

ABDOMEN. The omentum was very large, and was twisted like a rope. The right kidney was wanting; and there were no traces of the corresponding renal vessels. The left kidney was of the natural size, and contained a hydatid full of fluid.

THORAX. In the right ventricle of the heart there was a pretty large polypous concretion, which extended a considerable way into the vena cava. In the left a concretion of a smaller size, that went into the pulmonary vein, was observed.

HEAD. A considerable quantity of fluid was found within the ventricles of the brain. The glands on the plexus choroides appeared very much swelled.

C A S E II. (XLIX. 8.)

A VIRGIN, aged twenty two years, having been affected for many years with a double tertian, and eventually an acute, fever, attended with a pain in the head and the whole body, was thereby carried off.

Appearances on Dissection.

ABDOMEN. At the extremity of the ileum, in that part which is connected with the mesentery, several small bodies projected, which in magnitude, form, and colour, resembled the granules of gunpowder. On the internal surface of the uterus several round bodies like glands were observed, on the rupture of which a viscid humour was discharged.

THORAX. The lungs were slightly inflamed in those parts placed towards the back. The right ventricle of the heart contained a polypous concretion.

C A S E III. (LIX. 18.)

A LITTLE boy, affected with tertian fever, became quite emaciated; and at last, violent convulsions having supervened, died.

Appearances on Dissection.

ABDOMEN. The intestines appeared drawn in
towards

towards the mesentery, which was contracted; and their coats were somewhat rigid, and as it were dried. They contained, as did also the stomach, a great quantity of æruginous bile, which stained the scalpel of a violet colour. Two pigeons being slightly wounded with a knife dipped in the same bile, so that the bile remained in the wound, in a short time became affected with tremors, and died convulsed. A cock, too, who had swallowed a piece of bread soaked in that bile, died in a similar manner.

CAUSES OF INTERMITTENT FEVER.

PREDISPONENT CAUSE. It has of late become fashionable to regard debility as the universal predisposing cause to diseases; accordingly, it has been alleged to be that of intermittent fever. Unless, however, the term debility be understood in a very unusual sense, viz. as being an impaired degree of action of some of the functions either natural or animal, and not of the whole, it cannot be deemed predisponent to that disease: for it is well known, that persons apparently in the full vigour of health are liable to the attacks of intermittents. The circumstance predisposing to the disease must be that which renders the body susceptible of the impression of the exciting cause; it may therefore

exist in one organ only, or in several, or in all. The concurrence of many circumstances renders it probable that, in intermittent fever, the predisposition takes place principally in the stomach or alimentary canal; but our knowledge of the nature of the processes carried on in those organs is at present too imperfect, to enable us to specify the particular deviation from nature which constitutes or occasions that predisposition. It is a remarkable fact, that, after intermittents have once occurred in any individual, a strong predisposition to the return of the disease for ever after remains in that individual.

EXCITING CAUSE. It is now universally acknowledged that the most frequent exciting cause at least is the effluvia or vapour arising from stagnant water or marshes, which have been styled Marsh Miasmata. It has been thought necessary to ascertain the properties of those effluvia, in order to discover their mode of action; and accordingly many ingenious conjectures have been formed on the subject. As the effluvia proceeding from great lakes, salt water, and fogs, do not produce intermittent fevers, it has been supposed that those which do so, consist of something more than simple watery particles. In marshes, the putrefaction both of vegetable and of animal matter is commonly always going forward; and hence the

most general conjecture has been, that vegetable or animal putrefaction imparted a peculiar quality to the watery particles of those effluvia. Some well-attested facts, however, clearly overturn this opinion. Thus, for example, Dr Rush asserts that intermittent fevers were totally unknown in several counties of Pennsylvania, until the establishment of mill ponds *. Dr Fordyce mentions too, that during the war which took place in Flanders between the tenth and eleventh years of the present century, an army encamped upon sandy ground, in which water was found in digging less than a foot deep, and occasioned a great moisture in the air; which produced in a few days numbers of fevers, although the army was perfectly healthy before; and no more fevers were produced on shifting their ground †. It may therefore be concluded, that we are not yet acquainted with all the circumstances which are required to render marsh miasmata productive of intermittents. When it is recollected that intermittents are most frequent in warm climates, and in those climates prevail most generally during warm weather, it is most obvious, that the atmosphere

* Vide, Medical Observations and Enquiries, by Benjamin Rush, M.D. vol. ii. p. 265.

† See, A Dissertation on Simple Fever, by George Fordyce, M.D. p. 147.

sphere must have a considerable influence in promoting the action of the miasmata; but with respect to the particular nature of that influence nothing more than conjecture can be offered.

It has been imagined, by some respectable authors *, that intermittent fevers are communicated by contagion. This opinion, however does not coincide with the general observation of practitioners; and if it were just, it must have been long ago established beyond the possibility of contradiction. The author of these remarks has conversed on this subject with several judicious practitioners, who have practised for many years in the countries where intermittents prevailed; and he has been uniformly assured, that in no instance could they ever trace the origin of the disease to contagion.

Many other circumstances have been also regarded, by different authors, as exciting causes of intermittent fever; such as, fear, exposure to cold, watery diet, as that consisting of particular fruits, namely, water melons, cucumbers, &c. and the suppression of habitual evacuations, or recession of cutaneous eruptions. But it is, perhaps, more than probable that these circumstances act only by inducing that state of the body which predisposes to

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* Dr Cleghorn, p. 132. Dr Fordyce's Observations on Simple Fever, p. III.

the disease ; since there are many countries where intermittents never occur, although some of the inhabitants must inevitably be often affected with fear, and exposed to cold, and have occasionally a suppression of habitual evacuations, or the recession of cutaneous eruptions.

Upon the whole, therefore, it may be concluded, that the sole exciting cause of intermittent fever is a state of the atmosphere arising principally from the evaporation of water, but not proceeding solely from that circumstance, being influenced by other causes not yet ascertained. The late Dr Cullen regarded marsh miasmata to be the sole exciting cause. But proof has been adduced above, that the evaporation from damp ground, and from mill ponds, produces the same disease ; and it may be added that, in some countries, after having been long prevalent, intermittents disappear entirely * ; while, in other countries, where they never occurred, they become frequent, although there be no remarkable change on those countries with respect to marshes. Besides, in certain warm climates where there are no marshes, intermittent fevers prevail during the rainy season †.

PROXIMATE

* See Dr Currie's Historical Account of the Climate and Diseases of the United States of America, page 8.

† See Dr Mosely on Tropical Diseases, p. 14.

PROXIMATE CAUSE. Those who consider all fevers to be essentially of the same nature, differing only from each other in symptoms which are influenced by a peculiarity of habit, or of situation, have ascribed the phenomena of every species to the same proximate cause. It is obvious, however, from the observations formerly made, that continued fevers are perfectly distinct from intermittents, in their essential characters, in their progress, and in their exciting cause; and consequently, it is unphilosophical to allege that they depend upon the same proximate cause.

Neither lentor of the blood, nor impaired energy of the brain, nor spasm of the extreme vessels, nor simple debility, nor an over proportion or accumulation of carbon and hydrogen, can be regarded as the proximate cause of intermittent fever.

A redundancy of bile in the stomach and intestines has been by some proposed as the proximate cause of that disease; but not only is the bile often accumulated in great quantity in these viscera, but also is it even mixed with the blood throughout the whole sanguiferous system, without any such effect being produced.

When the phenomena of intermittent fever are carefully considered, many circumstances appear in favour of the old opinion of Helmont, that they
proceed

proceed from some affection of the stomach. The shivering, the sickness, the thirst, the pain in the head, all seem to originate from this cause. The appearances on dissection, too, in those who die of the disease, prove clearly that the system of the stomach is very materially affected. But the circumstance which chiefly favours this opinion is, the great susceptibility of a renewal of the disease from very slight exciting causes; as, from the prevalence of the east wind, and from the repetition of the original exciting cause. In this circumstance intermittents differ essentially from all other fevers: for it is well known, that after continued fever has once occurred, the person so affected is by no means so liable to a return of the disease as one in whom the disorder has never taken place. In eruptive fevers too, as in the small-pox and measles, the fever produced by the contagious matter can never be again produced in the same person. It may be added, in confirmation of all this reasoning, that medicines, received into the stomach previous to an expected paroxysm of intermittents, sometimes produce almost immediate effects by preventing entirely the fit. But although it were admitted, that the proximate cause of the disease is a deranged state of the stomach and its appendages, it would still remain for enquiry to ascertain what that deranged state is.

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Our present imperfect knowledge does not enable us to enter on such an enquiry.

OBSERVATIONS ON THE CASES OF INTERMITTENT FEVER.

THE preceding cases afford very little evidence respecting either the cause or effects of intermittents; and afford, too, very little room for remark. In the first case, no morbid appearance was noticed in the stomach; but a considerable quantity of fluid appeared within the cranium. The second case is an example of the intermittent having terminated in continued fever. In the third case, the over proportion of bile frequently observed in that fever was found; but none of the other appearances enumerated by Dr. Cleghorn, and already stated in these pages, were seen.

GENERAL OBSERVATIONS ON FEVERS.

THE importance of the subject induces the author of these remarks to deviate from his general plan, by offering a few additional observations on fevers.

In the preceding pages, synocha, typhus, and intermittents, are regarded as diseases very different

in their nature. Since, however, an opposite doctrine, founded on very plausible arguments, has been received among practitioners of the first eminence, it cannot be deemed improper to investigate the question at some length.

The first argument in favour of the opinion, that all fevers are of the same nature, is, That persons of different habits of body, exposed at the same time to the exciting cause of fever, have fevers of a different species. Thus Guido Fanno mentions, that an epidemic prevailed at Leyden, during the Summer of 1669, which affected some persons with continued fever, and others with intermittent *.

In contradiction to this argument, it is to be observed, that where a number of persons of opposite temperaments have been exposed to the same exciting cause, although some anomalous symptoms appeared in particular instances, the fevers in consequence have proved essentially of the same nature †. With respect to the epidemic at Leyden, it is not inconsistent with observation to allege that two different species of epidemics had prevailed at the same time; for it is well known that this sometimes happens. Dr. Hillary, for example,

* Vide Haller's Disput. Pathol. p. 204.

† Vide Sir John Pringle's Observations on the Jail or Hospital Fever, § 2.

ample, remarks, that dysentery and catarrhus fever were, during 1757, epidemic at the same time in the island of Barbadoes *.

The second argument in favour of this doctrine is, That intermittents sometimes degenerate into continued fever, and *vice versa*. Many assertions of this circumstance occur in the writings of authors of the first eminence †. It must however be allowed, that the evidence on the subject is somewhat ambiguous: for in certain places of Great Britain, as in the fens of Lincolnshire, &c. intermittents are known to exist for a great length of time without being converted into continued fevers; and in those parts of the Island where intermittents do not prevail, continued fevers are never observed to terminate in intermittents. The argument under consideration, therefore, is not supported by the phenomena of fevers in Great Britain; but rests entirely on those which appear in warm climates. The evidence in that respect nevertheless is not perfectly satisfactory. Dr. Cleghorn says, that the tertian fevers epidemic in Minorca, “about the time of the equinox, assume a surprising variety of forms; and very often counterfeit continu-

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* Observations on the Epidemic Diseases in Barbadoes, by Wm. Hillary, M.D. page 125.

† Vide Cullen's First Lines, par. xxx. & xxxi.

ed fever, having long redoubled paroxysms *.” May it not therefore be presumed, that the inaccurate observation of practitioners is the only foundation for the opinion, that fevers in warm climates spontaneously vary their type during their progress? Besides, although it were proved beyond the possibility of doubt, that intermittents terminate in continued fever, and *vice versa*; no evidence is thereby afforded that the diseases are of the same nature: for, by similar evidence, dysentery and intermittents should also be of the same nature, since they too, under certain circumstances, are apt to terminate in each other †.

But the principal circumstance by which the doctrine alluded to has acquired influence, is the commonly received opinion, that fevers are produced by a number of exciting causes of an opposite nature. If contagion, human effluvia, marsh miasmata, exposure to cold, fatigue, intemperance, and passions of the mind, all severally induce the same disease; it must follow, that the varieties in the symptoms observed, in particular instances, depend upon peculiarity of constitution, and not upon the nature of the disease.

Although, in the preceding pages, the author
of

* Cleghorn, loco citato, page 185.

† Vide Cleghorn's Observations, p. 134; and Dr. Mosely on Tropical Diseases, p. 121.

of these remarks has alleged, that exposure to cold, passions of the mind, intemperance, &c. where they do excite fever, produce only synocha; that specific contagion, a peculiar state of vegetable putrefaction, and human effluvia, are the sole exciting causes of typhus; and that marsh miasmata, and the vapour arising from stagnant water, under certain circumstances, are the only exciting causes of intermittents; he is well aware that several objections may be urged against the opinion. Some of these have been already noticed, and, it is thought, repelled. One however still remains to be considered; viz. That during the convalescence succeeding typhus, exposure to cold, intemperance, passions of the mind, &c. are frequently observed to occasion what is termed a Relapse, or a return of the disease, which had disappeared. Any reasoning upon this fact must be avoided in this work; as it would lead to discussions by far too extensive. The circumstance probably depends upon that law of the animal oeconomy, by which recently deranged functions are very readily again affected.

SECT. III. *HECTIC FEVER.*

HECTIC FEVER, being symptomatic of some previous disease, never invades suddenly; but attacks the patient by slow, and in general insidious, approaches*. In this disease there are two exacerbations every twenty-four hours; in which respect it coincides with remittent fever. The first of these exacerbations occurs about noon; and the second towards the evening. Each of them is ushered in by a chilly fit; not always distinctly marked, as it appears often to be nothing more than an increased susceptibility of the impression of cold. A dry burning heat soon succeeds; attended with a florid red colour in the cheeks. This colour however is confined within a circumscribed spot. The pulse is frequent in the number of pulsations, and quick in the contraction of the artery; and at that time pretty full. The tongue is clean, as it commonly is through
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* For an accurate description of hectic fever, see Dr. Cullen's First Lines, par. 858, et seq.; and Medical Transactions, vol. ii, page 1.

the whole of the disease. Some degree of thirst is felt. There is seldom any headach; and never, till towards the fatal termination of the complaint, any delirium. The urine is high coloured; deposits a red branny sediment; and is sometimes covered with a fatty film. The patient feels a certain uneasiness; more remarkably observed during the evening exacerbation, as it induces restlessness and watching; but he is unable to ascertain the circumstance from which his uneasiness proceeds. By degrees the remission takes place; and he thinks himself free from every complaint. He continues however to have a hot dry skin, a quick weak pulse, a particular paleness in the face, a pearly whiteness in the eyes, and considerable prostration of strength. The appetite for food is often not much impaired. The mind, with very few exceptions, is chearful; no apprehension of danger being entertained. The belly, at the beginning, is commonly bound. As the disease advances, many of these symptoms are aggravated, and some additional ones occur. Thus the shiverings come on frequently during the hot fit. The evening exacerbations terminate in profuse colligative sweats. Great emaciation of the body takes place; so that the hairs fall off, and the nails of the fingers become adunque. The eyes are hollow; the belly is drawn inwards; and the skin grows hard.

Diarrhœa,

Diarrhœa, frequently alternating with the morning sweats, supervenes. The feet are affected with œdematous swelling. The tongue and fauces appear inflamed, and at last are covered with aphthæ. Soon after which death, preceded often for some days by delirium, ensues.

The progress of hectic fever is so slow, that the death of the patient may be generally with certainty prognosticated many weeks before it happen.

The seat of the disease is evidently the vascular system.

Hectic fever, as already mentioned, is symptomatic of some other disorder. The diseases of which it is a symptom, to be noticed in this work, are; *First*, Phthisis Pulmonalis; *Secondly*, Tabes Mesenterica; and, *Thirdly*, Certain anomalous cases of tabes.

§ I. PHTHISIS PULMONALIS.

EMACIATION and weakness of the body, attended with cough, hectic fever, and most generally the expectoration of purulent matter *, is the best

* Vide Cullen Nosolog. Ed. 1785. p. 397.

best definition of phthisis pulmonalis that can be given.

As this disease arises from exciting causes of opposite natures, and is attended in different cases by different symptoms, authors have divided it into species. Some have founded their arrangement on the symptoms * ; others, on the remote causes † ; and some on the stages of the disease ‡.

The author of these remarks proposes, with much diffidence, an arrangement derived from the diseased state of the lungs. In doing this he offers two reasons ; *First*, That he apprehends the symptoms of the disease to be different, according to the morbid affection of the lungs ; and, *Secondly*, That he believes such an arrangement to be subservient to practical purposes.

Phthisis pulmonalis may therefore, in his opinion, be divided into three species ; viz. Phthisis a Tuberculis, Phthisis a Materia calculosa, and Phthisis a Vomica.

The following general observations are applicable to all the species of the disease.

Although

* Vide Macbride's Works, quarto edition, p. 397.

† Vide Richardi Morton Opera, p. 109. and Dr White's Observations on Phthisis Pulmonalis, published by Dr Hunter of York, p. 94.

‡ Vide Cullen Nosolog. Edin. ut supra, p. 159 ; and Rush's Medical Enquiries, vol. ii. p. 111.

Although the progress of Phthisis Pulmonalis be commonly slow, its termination, in by far the greater number of cases, is uniformly fatal; and indeed it has been questioned whether recovery from the disease ever took place. The fatal termination, however, is sometimes protracted for a considerable length of time.

It is remarkable that apprehension of danger is seldom entertained by the patient himself; for it often happens, that he sinks under the disease without being in the least sensible of his approaching dissolution. But, in those rare cases, where the living principle seems to be extinguished with great difficulty, where aphthous ulcerations appear in the fauces, and where, from confinement to bed for a considerable length of time having become indispensable, gangrene takes place in those parts of the body which suffer the greatest pressure, the patient seems sensible of his hopeless condition for a short time before death.

It is a curious circumstance, that this disease is suspended by pregnancy, and is sometimes cured by mania. It has been generally imagined that the life of a patient affected with phthisis pulmonalis is protracted by pregnancy; but there is reason to believe the opinion to be erroneous. In order to judge of this, the ordinary progress of the disease, where it is uninterrupted, ought to be compared with that where it is suspended by pregnancy. If this be

done, it will be generally found, that, if two women be affected with phthisis at the same time, and one of them shall become pregnant, the other shall live considerably longer, although in her the disease proceeds uninterruptedly through its several stages. This circumstance has occurred repeatedly to the observation of the author of these remarks; who has uniformly found, that women labouring under phthisis, previous to pregnancy, sink within two or three weeks after delivery. Experience has also taught him, that the disease is not always suspended by pregnancy; for he has seen several cases where such women have died during the sixth or seventh month of gestation, sometimes undelivered, but most frequently with previous abortion*.

Phthisis generally attacks at some period between the age of puberty and the thirty-fifth year.

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PHTHISIS

* The author some years ago attended a patient whose case was very singular. Incipient phthisis was suspended by pregnancy, and apparently cured by mania having supervened to delivery. For some months after the mania had ceased, the patient continued in perfect health; but symptoms of phthisis then recurred, and at the same time she became pregnant. The disease proceeded so rapidly, that premature labour took place about the sixth month of gestation; she was delivered of a still-born child; and expired within twenty four hours.

PHTHISIS A TUBERCULIS. This is by far the most frequent species of the disease. It occurs only in those of a scrophulous habit, and in those born of scrophulous or of phthifical parents. It is commonly preceded by the following symptoms, enumerated by Dr Rush *; the principal of which were first noticed and accurately detailed by Morton † :—“ A slight fever, increased by the least exercise; a burning and dryness in the palms of the hands, more especially towards the evening; rheumy eyes upon waking from sleep; an increase of urine; a dryness of the skin, more especially of the feet, in the morning; an occasional flushing in one and sometimes in both cheeks; a hoarseness; a slight or acute pain in the breast; a fixed pain in the side; a shooting pain in both sides; headach; occasional sick and fainty fits; a deficiency of appetite; and a general indisposition to exercise or motion of any kind.” Sometimes, however, these symptoms do not take place, or are not observed.

The first symptom of this species of the disease is cough, which at the beginning is generally slight, and unaccompanied with expectoration. After the cough has continued for a considerable length of time, being sometimes more and sometimes less violent,

* Rush's Medical Enquiries, vol. ii. p. 107.

† Vide Richardi Morton Opera, p. 39.

violent, and being aggravated by the most apparently trifling causes; hoarseness of the voice, a sense of weight and straitness in the chest, felt more especially after motion; inability to lie on one or both sides, and slight difficulty of breathing supervene. The pulse from the first is frequent, and for a considerable time full and hard. The breathing is much quicker than that of a person in health. It is performed with great motion of the chest, and is frequently accompanied with a noise similar to that of sighing. The cough gradually becomes more violent; it attacks by fits, which are particularly distressing towards the evening and during the night; and the expectoration of mucus, and afterwards of pus, takes place. These symptoms are attended with occasional flying stitches in the breast and sides, great lassitude, emaciation of the body, and inequality of temper. The appetite for food is diminished, and vomiting frequently occurs after eating. Blood is generally spit up, sometimes in small and sometimes in large quantities; often before any appearance of matter can be perceived, and not unfrequently along with pus. The expectoration, therefore, at this period of the disease, is various in its appearance; sometimes resembling mere mucus; at other times, pus, blood, or a mixture of both; so that it is of very various colour and consistence; being at times white, grey, brown, yellow, red,

and green, and sometimes streaked with all these colours; and being at one time thick, at another time thin, and in some cases being tough, and imitating the figure of the branches of the bronchia. It is often difficult, at the beginning, to ascertain whether the matter expectorated be mucus or pus. Many experiments have been made, with the view of establishing a criterion between the two. This however, still remains a desideratum, probably for the reason mentioned by Dr. Stark, viz. that the spitting of consumptive persons combines the essential properties of mucus and of pus*.

To the symptoms above enumerated, hectic fever is added. The progress of the disease, after this period, is, comparatively speaking, rapid, as it generally terminates fatally within a few months from that time.

Authors have divided the symptoms of this species of phthisis into two stages; the first of which they style Inflammatory, comprehending all the symptoms previous to the occurrence of hectic fever; and the second they term Putrid or Suppurative.

The appearances on dissection exhibit roundish, white, firm bodies, of different sizes, from the smallest granule to about half an inch in diameter, but most ordinarily of the size of a garden pea,
named

* Vide The Works of the late Dr. Stark, p. 23.

named *Tubercles*, situated in the cellular structure which connects the air cells of the lungs together. The small tubercles are frequently accumulated in clusters. When cut into, they appear to consist of a solid white substance, almost as firm as cartilage, having the cut surface, smooth, shining, and uniform, and being covered with a thin capsule. The larger tubercles consist also of a curdly kind of pus; and the same matter is observed in cutting into the clusters of the smaller tubercles; but its origin cannot be ascertained. The cavity of the large tubercles always communicates with branches of the trachea. Neither cells, vesicles, nor vessels have been discovered in tubercles. The branches of the trachea communicate also with cavities of a larger size (the largest however not exceeding four inches in extent), called *Vomicæ*. These cavities contain pus of various appearances and consistence in different cases. With this they are not filled, as they have the surface only besmeared with it. They are lined with a fine delicate membrane, similar to the capsule of the tubercles. They communicate with branches of the trachea by round smooth openings, and with one another by ragged and unequal ones. They are generally situated towards the back part of either lobe, and are commonly concealed. Many circumstances concur to shew that the vomicæ are modifications of the tubercles. The lungs contiguous to the tubercles
and

and vomicæ are sometimes in a natural state ; more often indurated. The pulmonary arteries and veins, as they approach the larger vomicæ, are suddenly contracted and obstructed, so that they have little or no communication with those cavities. This contraction does not take place in the vicinity of vomicæ under an inch in diameter. In some cases, these morbid changes are very extensive ; and in other cases, they are limited to particular parts of the lungs only. In the latter instance, the superior and posterior parts of those organs are alone diseased ; and in the former, the same parts are principally affected. The lungs of the left side are more commonly diseased than those of the right *.

PHTHISIS A MATERIA CALCULOSA. This species is characterised by a short cough, unattended with expectoration ; short, frequent, and difficult breathing, which is neither relieved nor aggravated by posture ; pain in the thorax ; and sometimes excessive discharge of blood from the lungs. It is peculiar to persons above thirty years of age ; while the phthisis a tuberculis occurs most frequently before that period. The progress of this species is
not

* The above description of the appearances on dissection is borrowed from Stark's Works, p. 26, et seq. ; and Baillie's Morbid Anatomy, p. 46.

not so rapid as that of the former. The patient generally dies during a fit of breathlessness.

The appearances on dissection exhibit earthy concretions, formed throughout the substance of the lungs; and seated either in the extreme branches of the bronchia, or in the cells connected therewith.

PHTHISIS A VOMICA. This species is generally preceded by pneumonia, or some accidental injury of the lungs. The expectoration, from the beginning, is purulent; and in considerable quantity; and the cough is trifling. The breathing is commonly frequent and short; and inability to lie on one or other side is experienced. The progress of the disease is commonly very rapid.

Appearances on dissection show extensive abscesses in the lungs, independent of tubercles. These abscesses, called *Vomicæ*, (as well as those connected with tubercles) are seated sometimes within the substance of the lungs, and sometimes on the external surface; in which case an adhesion is generally found between the affected part and the pleura. The death of the patient, in this species, is commonly very sudden; and is immediately occasioned by the bursting of the abscess.

 CASES OF PHTHISIS PULMONALIS.

PHTHISIS A TUBERCULIS.

C A S E I. (XXII. 15.)

A STRUMPET, aged about twenty years, had been affected for many years with a slow fever, a cough, an ill conditioned expectoration, and emaciation of the whole body. She complained of pain in the left side of the thorax; and when she lay on that side was troubled with difficulty of breathing. To these symptoms a copious spitting of blood supervened. This was checked: but two days after, while a violent south wind prevailed, in which state of the air those who are affected with a disorder of that kind generally die, she expired.

Appearances on Dissection.

THORAX. The right lobe of the lungs adhered very slightly to the ribs. In the substance of both lobes a number of hard tubercles, of a whitish colour, and resembling glandular bodies, were observed. The superior part of both lobes was also affected with other disorders. For in the right lobe, towards the sternum, a large hollow ulcer, containing purulent matter, was seen; and the left, towards the side, contained a hard substance,

equal in size to a large pear, resembling in some measure the substance of the pancreas when indurated. In the middle of this body there was a small ulcer full of pus. In the pericardium there was little serum. In the left ventricle of the heart a small polypous concretion was found; and the right contained a polypus of a moderate size, the greater part of which was inserted into the neighbouring auricle.

C A S E II. (XXII. 14.)

A MUSICIAN, middle aged, who had three years before been affected with spitting of blood, had afterwards been troubled with cough, attended with the expectoration of the matter styled defluxion. After many months had elapsed, the spitting of blood returned; and afterwards it again took place, and left behind it the expectoration of a great quantity of thick matter of a very bad appearance. He could lie easily on either side; and had no pain in the thorax. His cough however was troublesome during the night, and especially after supper. His breathing was difficult, particularly after motion, even of the slightest kind. Along with these symptoms, he had great thirst and oppression at the stomach after taking food. For some weeks before his death he had frequent nocturnal sweats. Although it had been usual for

his feet to be sometimes swelled, and afterwards to subside entirely; yet during the latter days of his existence they no longer subsided. Diarrhœa, by which much ferous matter was discharged, having supervened, he died as he was beginning to dress himself in order to rise.

Appearances on Dissection.

THORAX. The lungs were filled with many tubercles. The superior lobule of the left lobe, at the upper part towards the sternum, was externally very much indurated; and contained internally a pretty large ulcer, in which sanious matter like a poultice was found. In the right cavity of the thorax almost half a pound of ferous fluid was seen; and in the pericardium there was the same quantity. The serum in that latter part having been exposed to the fire, completely disappeared, leaving only a pellicle at the bottom of the vessel.

C A S E III. (XXII. 18.)

AN unmarried woman became affected with a fever, said to be in consequence of a fright. The fever was attended with a pain in her breast. The parotides, and almost all the glands of the neck, were swelled. She died.

Appearances on Dissection.

ABDOMEN. The abdomen contained a small
quantity

quantity of limpid watery fluid. The omentum was connected with the mesentery and peritoneum by a kind of small ligaments. The surfaces of the peritoneum, the omentum, the mesentery, the intestines, the uterus, the gall-bladder, and the urinary bladder, were unequal; in consequence of protuberating bodies which lay here and there at a distance from each other, and were of various shapes and sizes. In the upper part of the omentum they were exceedingly small; in the inferior part they were very large and numerous, and lay quite contiguous to each other.

THORAX. In the left lobe of the lungs, not only was there an ulcer containing sanious ichor, but also substances, similar to those which were found in the mesentery and in the other parts of the belly, appeared. Some of these bodies contained pus; some a matter almost like a poultice in its consistence; while some were so solid, that they resembled natural conglobate glands.

C A S E IV. (XXII. 24.)

A PHYSICIAN, middle aged, who had long had a cachectic appearance in his face, and had for some time been affected with difficulty of breathing and hoarseness of voice, at length began to spit up a variously coloured matter. Along with this matter he one day coughed up a small curved

bone, (but not very minute) which was smooth on the concave part, and rough on the convex. After this he was pretty frequently affected with a sense of suffocation. At length one night, after having said, before he went to bed, that he felt himself better, he was found dead. His death took place without being perceived by a person who lay by him for the purpose of taking care of him.

Appearances on Dissection.

THORAX. In the lungs, both externally and internally, a number of vesicles, filled with white pus, of various sizes, the largest not exceeding that of a grape, was observed. The pericardium contained a considerable quantity of turbid fluid. In the heart one very small polypous concretion was found. The other parts within the thorax could not be examined leisurely, as the body was opened without permission from the relations.

C A S E V. (XXVI. 29.)

A WOMAN, who had been for a long time thought to be consumptive, was found to have died suddenly.

Appearances on Dissection.

THORAX. In the left cavity of the thorax the corresponding lobe of the lungs contained three or four tubercles full of pus. In the right cavity
the

the lungs were found ; but coagulated blood, to the quantity of four pounds, was found extravasated. This blood had been effused from the trunk of the vena azygos. That vessel, although it had collapsed in consequence of the effusion, was still so large, that it might be compared to the vena cava. The dilated portion was about the length of a span, and in its middle, an open foramen of the form of an elipsis was perceived. Through this foramen the extravasated blood had passed.

PHTHISIS A MATERIA CALCULOSA.

CASE I. (XV. 25.)

A WOMAN affected with a very slight scabies, and considerable wasting of flesh, was troubled with a short cough, which was never attended with a discharge of thick expectoration, but always with a difficulty of breathing. This latter complaint was neither increased nor diminished by posture, as it continued the same whether she lay on her back or on either side. When her neck was raised, indeed, she breathed a little more easily ; but then she felt the sensation of a weight extending from the fauces into the cavity of the thorax, and rendering the fauces narrow. With these symptoms she died.

Appearances

Appearances on Dissection.

THORAX. The lungs were as it were tartarized; for wherever they were cut into, the knife made the same rasping kind of noise as if one had cut into sandy concretions.

C A S E II. (LXVIII. 12.)

A YOUNG gentleman, aged fifteen years, of a good complexion, who had been healthy from his infancy, having been very severely chided, and, as he was naturally thoughtful, having been much affected thereby, continued for the succeeding three days almost in a state of stupor. On the third month after this, he begun to observe small glands on his neck, which at first increased in size gradually; but, in a short time the increase of the disease became so rapid, that besides the swelling of the salivary and axillary glands, prominent bodies of the size of a pigeon's egg, resembling strumous glands, were felt on the back, the breast, and more especially about the clavicles. Tumours of the same kind were soon after felt on the integuments, and also within the cavity of the abdomen. All these tumours were indolent, except one lying on the pectoral muscle, which was three inches in length, livid in its colour, and somewhat painful to the touch. Those within the belly, too, particularly on the left side, where there was a great degree

degree of tension, along with resistance when pressed, were painful. Not long after the beginning of the disease, an acute pain was felt sometimes in the right knee and leg, and sometimes in the left. From that period he was always unwell, being affected with symptomatic and irregular feverish attacks, with watchings, and with progressive emaciation. He was nevertheless lively and cheerful to the very last. His appetite for food never diminished, but on the contrary was very keen, especially in the latter days of his life. Although he felt a certain uneasiness about his throat, proceeding from mucus, which was readily hawked up by a slight cough, he never had any difficulty of breathing; which, considering the appearances after death, is very surprising. Many external and internal remedies were employed from the very beginning, and more especially during the progress of the disease, when the most active medicines were prescribed by the most experienced practitioners. But, notwithstanding every means, the bulk of the tumours increased, and the disease was so rapid in its course, that, although it had only commenced in December, the death of the patient took place towards the end of May.

Appearances on Dissection.

EXTERNALLY. The integuments of the neck, breast, and abdomen, being cut into, the external tumours were found to be seated in the adipose membrane,

membrane, which in those places was closely connected by the under-lying muscles. All these tumours were filled with a whitish matter, partly of a fluid, but chiefly of a solid and sebaceous consistence. Some of the most prominent, as those adhering to the pectoral muscles, which formed with the axillary glands one continued body, discharged when cut into a yellowish and sanious fluid.

ABDOMEN. The whole omentum appeared to be beset here and there with small hard bodies, filled with the whitish matter above mentioned. The liver, the spleen, and the kidneys were themselves in a natural state; but the following appearances about each of these organs were observed: The peritoneum was strongly connected to the right side of the liver. It, then, after having in several places formed as it were one and the same substance with the contiguous muscles, projected outwards in the form of a body of the size of a hen's egg, filled with the matter already mentioned. This body was connected with the urinary bladder. Near the spleen, the left part of the mesocolon formed a swelling, which consisted of a congeries of tumours resembling pigeons eggs. These tumours were filled with the same matter observed in the others. The pancreas was full of the same tumours, and similar swellings were seen scattered up and down through the mesentery. The adipose membrane of the kidneys was monstrously

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stoutly thickened, being on the part placed towards the vertebræ two inches, and on the opposite part five inches thick. It was every where distended with the matter so often mentioned. The left kidney, together with a hard line which intersected the matter, weighed thirty-six ounces. The intestines were by no means free from disease: For small bodies of the same nature with those already seen, were observed on the adipose appendages of the colon, and on the ligamentous bands which pass through that intestine. The glands of Peyerus, in the small intestines, in some places, were of the figure and size of a lupin. One of these glands, much larger than the rest, was inflamed, and contained putrid fluid.

THORAX. The mediastinum was in the middle thickly beset with the bodies above mentioned, and one of these of the size of a small hen's egg, not only lay contiguous to, but also compressed the trunk of the aspera arteria. The lungs were internally sound, but on their external surface, a number of hard and stony globules of the size of barley-corns, were implanted. The same surface was on the back part, hollowed out on both sides, but particularly on the left, in consequence of tumors of a large size which had formed on the adjoining pleura. Some of these tumors were situated near the dorsal vertebræ; and others were so disposed that one lay on each rib regularly

from the lower part to the upper. The heart was in a natural state, except that the external surface of the right auricle was completely granulated, as it were from little bodies of the same kind.

CASE III. (XLVIII. 38.)

AN old woman had her right leg bitten by a dog. This was succeeded by great thirst, intestinal flux, and slight fever. After several days the thirst abated; but the other symptoms continued. She was then affected with vomiting, by which some worms of the lumbricus kind were thrown up. The vomiting finally ceasing, she became more and more exhausted, and expired. In this patient, the pulse had never been strong, but had sometimes been liable to intermissions. The woman had also been subject to cough, which however was slight.

Appearances on Dissection.

ABDOMEN. The stomach appeared somewhat distended with air; and being naturally large, it extended so low that the portion of the colon which lies next it, was situated below the navel. The whole of that intestine, except its beginning, which together with the cæcum was turgid with air, was so much contracted that it resembled one of the small intestines. The duodenum, on the

contrary, was much larger than usual, and passed downwards on the right side over a very long tract of vertebræ. The other small intestines were of a dirty and colour. The mesenteric glands of a moderate size, were distinctly perceived under a small quantity of fat. The liver was large. Two furrows, as if made by a deep impression of the fingers were perceived on the superior part of its convex surface, from whence they descended in a parallel direction for a considerable length on the fore part. The spleen was thicker than usual; it was somewhat rough on the gibbous surface, in consequence of certain granules as it were; internally it was of a pale colour. The uterus lay towards the left side. Its whole internal surface was rough, but was not ulcerated; although that of the fundus, but not that of the cervix, was covered with black blood. The parietes of the os tincæ were somewhat thickened.

THORAX. The lungs were distended with air. Many of the bronchial glands about and within them were enlarged, and contained a tartareous matter. Both ventricles of the heart were filled with polypous concretions of a yellow white colour, placed amidst some black blood. Some of these concretions were thick, and not easily torn. The valvulæ mitrales at the lower part, and especially at that part next the aorta, were composed

of a compact substance, which was internally of a white colour. None of the valves of that artery were perfectly free from incipient ossifications. One in particular on the surface, which was turned towards the side of the artery was completely bony, rough, and unequal, in consequence of particles really osseous, in some parts lying upon each other, that projected like grains of sand. On the other surface, this valve degenerated into a fleshy excrescence of a larger size than itself.

HEAD. Air bubbles were observed in the vessels of the pia mater. A small quantity of fluid was found under the same membrane and within the ventricles. The choroid plexuses were not pale.

PHTHISIS A VOMICA.

C A S E I. (XXII. 16.)

AN unmarried woman, aged twenty-four years, after having been affected with spitting of blood, was troubled with a cough. She expectorated a catarrhus matter, which at last resembled sanies. She was feverish, and complained of pain in the thorax, especially in the left side, on which she could not lie. Her whole body was emaciated, except her feet which were both considerably swelled.

The

The right foot was affected with erysipelas for some days before death.

Appearances on Dissection.

THORAX. The left cavity of the thorax was filled with a serous fluid, together with small portions of coagulated blood, adhering in different places to the pleura, and to the lower edge of the lungs. The pleura was as red as if it were inflamed, and the contained portion of the lungs had become indurated as inflamed lungs generally are. The right cavity of the thorax contained little serum, and in it the pleura was found; but the lobe at that part next the clavicle was somewhat hard, and concealed an ulcer in the middle of the hardened portion. Scarcely any vestige of fluid could be traced in the pericardium. The ventricles of the heart were completely filled with coagulated blood.

CAUSES OF PHTHISIS PULMONALIS.

PREDISPOSING CAUSE. Persons of a sanguine, or of a sanguineo-melancholic temperament, as it is called, who have a very fine skin, with the veins shining through it, a rosy complexion, soft flesh, thick upper lip, a long neck, narrow chest, prominent shoulders, and are altogether of a delicate make, and of much sensibility and irritability; those

those the growth of whose body had been at the age of puberty remarkably rapid; those who during the early periods of their life had been affected with scrophula; and those born of scrophulous and of phthifical parents, are chiefly predisposed to the first and third species of phthisis.

It appears, therefore, that a particular construction of the body, or of the system, is the predisponent cause of the disease in those species. The state of the system on which the second species depends, is exceedingly obscure. It is probably somewhat analogous to that from whence preternatural ossification proceeds.

EXCITING CAUSES. Hæmoptysis, Catarrh, Asthma, Pneumonia; Wounds and Injuries from external violence affecting the Lungs; the Introduction of Extraneous Matters into those Organs; Tubercles of the Lungs; Contagion; Excess of Oxygen in the Blood; General Debility; the Repulsion of Cutaneous Eruptions; and the Metastasis of the matter of Syphilis and Scurvy, have been regarded as the exciting causes of the first and third species of phthisis pulmonalis.

Hæmoptysis, Catarrh, Asthma, and Pneumonia, are only productive of phthisis pulmonalis where there is a predisposition to that disease. The same observations apply to wounds and external injuries communicated to the lungs: for Dr. Rush mentions,

tions, that out of twenty-four British soldiers admitted into the hospitals, during the campaign of 1776, with wounds in their lungs, twenty-three recovered *.

The Introduction of Extraneous Matters into the Lungs. This happens in consequence of certain occupations in life ; as, the grinding of corn, flax-dressing, &c. But it is not probable that under such circumstances phthisis pulmonalis is produced, unless there be a strong predisposition to the disease. Thus, millers are subject to a dry cough, which often continues for many years without terminating in phthisis.

Tubercles in the Lungs. The nature of these tubercles has been variously described by different authors. By some they have been regarded as enlarged glands † ; and by others, as effusions of mucus ‡. From the observations of Dr. Stark and of Dr. Baillie §, it appears, that tubercles are seated in the cellular structure which connects the air cells of the lungs together ; and consequently, it is inferred by Dr. Baillie, they cannot be glandular, as there are no glands in that membrane. Their circumscribed form, and their structure, seem

* Vide Dr. Rush's Medical Enquires, vol. ii. p. 97.

† Vide Dr. Cullen's First Lines, par. 876 ; and Dr. M'Bride's Works, quarto edition, p. 397.

‡ Vide Dr. Rush's Enquiries, vol. ii. p. 99.

§ See Baillie's Morbid Anatomy, p. 46.

seem to overturn the opinion of their being effusions of mucus. It has been imagined that tubercles are inorganised bodies; but the following circumstances contradict this. *First*, The progressive increase in their size, which is clearly marked; *Secondly*, The conversion of their contents into pus; and *Thirdly*, Their being covered with a thin capsule. Their precise nature still therefore remains to be determined. The supposition of their being indurated glands was certainly the most natural one; seeing that they are generally accompanied with glandular swellings in other parts of the body, and that they occur only in persons born of scrophulous and phthifical parents.

Contagion. It is still disputed among practitioners whether phthisis pulmonalis be ever communicated by contagion. That it is not a frequent cause of the disease, is evinced by daily experience: but it might be rash to assert that it can never produce it, especially as there are some striking facts adduced to prove that it sometimes acts as an exciting cause. Thus Dr. Rush relates, that “the late Dr. Beardley of Connecticut informed him, that he had known several black slaves affected by a consumption, which had previously swept away several of the white members of the family to which they belonged *.”

Excess

* See Dr. Rush's Medical Enquiries, vol. ii. p. 101.

Excess of Oxygen in the Blood. Dr. Beddoes* has endeavoured to shew, that in certain cases of phthisis the blood is hyper-oxygenated. This over proportion of oxygen in the blood, however, though proved, must necessarily proceed from some deranged structure of the lungs, or of the system. In that case it should be regarded as the effect of the exciting cause, and not as the exciting cause itself: a distinction necessary not only for accuracy of ideas, but also probably for practical purposes †.

General Debility. Dr. Rush has alleged, that general debility of the whole system is the exciting cause of the first species of phthisis pulmonalis; and that some of the circumstances generally enumerated as such, as hæmoptysis, tubercles, &c. are the effects, and not the causes, of the disease; while others, as violent passions of the mind, excessive evacuations, cold and damp air, &c. act only by producing debility. “Should it be asked,” he observes, “Why does general debi-

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lity

* Observations on the Nature and Cure of Calculus, Sea Scurvy, Catarrh, Fever, &c. by Thomas Beddoes, M. D. page 136, et seq.

† Dr. Beddoes has proposed two theories respecting the cause of consumption. By the one of which, he considers the diseased state of the lungs to be the effect of the increased quantity of oxygen combined with the blood; and it is that theory which is considered here. The second theory is noticed in another place.

lity terminate by a disorder in the lungs rather than any other part of the body? I answer, That it seems to be a law of the system, that general debility should always produce as a symptom some local disease*." He farther observes, " It would seem as if the debility in the cases of consumption is seated chiefly in the blood-vessels; while that debility which terminates in diseases of the stomach and bowels is confined chiefly to the nerves; and that the local affections of the brain arise from a debility invading alike the nervous and arterial systems." It is not easy to comprehend, notwithstanding the observations of the ingenious author of this opinion, how debility should produce an affection of the lungs without the intervention of some exciting cause. The symptoms of general debility which he enumerates, as preceding phthisis pulmonalis, viz. " quick pulse, especially towards evening, heat and burning in the palms of the hands, faintness, headach, sickness at stomach, and occasional diarrhœa," certainly do sometimes take place before any complaint in the breast; but in by far the greatest number of cases, occur only after the affection of the lungs has commenced.

It is well known that phthisis sometimes follows the repulsion of cutaneous eruptions, as small pox, measles

* Vide Rush, loco citato, page 105.

measles, &c. and it has been alleged that it also follows in some cases syphilis and scurvy. This has been accounted for in different ways. Thus Dr Cullen supposes that those diseases produce an acrimonious state of the fluids, which occasions tubercles; and Monf. Portal, as well as Dr Ryan, think that they produce a local inflammatory affection of the lungs, which terminates in ulcerations without tubercles.

There is no inconsistency in supposing that those diseases, in different cases produce both effects: for there is no doubt that tubercles in an incipient state sometimes exist for a considerable length of time, without being accompanied with any morbid symptom. In such cases, any circumstance which can excite inflammation of the lungs must produce such a change in the state of the tubercles as shall render them exciting causes of phthisis. In other cases, the effect of these diseases may be simply inflammation of the lungs, which terminates in suppuration.

THE cause which induces the second species of phthisis pulmonalis seems to be a certain disposition in the blood-vessels of the lungs, to form or to deposit calcareous matter; but the nature of this disposition is too much involved in obscurity to be investigated here.

On the whole, there appears to be three classes of exciting causes of phthisis pulmonalis, corre-

sponding to the three species of the disease. The first comprehends all those circumstances which tend to the production, or perhaps, to speak more accurately, to the inflammation of tubercles; the second consists of a disposition in the blood-vessels of the lungs to form or deposit calcareous matter; and the third includes every circumstance which prevents the healing of ulcers formed accidentally in the lungs.

PROXIMATE CAUSE. It has been generally imagined that the proximate cause of phthisis pulmonalis is ulceration of the lungs; and this supposition has been thought to be founded upon the appearances on dissection*. It has however been already stated, that, in some cases of the disease, there are no ulcerations in the lungs; as, for example, where there is a deposition of calcareous earth.

Another opinion has been advanced on this subject, by Dr Beddoes; viz. that the structure of the lungs is so altered as to transmit a more than ordinary portion of oxygen to the blood †. In support of this hypothesis, Dr. Beddoes has endeavoured to show (as has been already mentioned),
that

* Vide, Home's Princip. p. 147—Cullen's First Lines, par. 362.

† Beddoes's Observations on the Nature and Cure of Calculus, Sea Scurvy, Consumption, &c. p. 135.

that the blood in phthifical patients is hyper-oxygenated ; and has adduced several cafes, to prove that the means moft conducive to the cure of confumption are thofe by which the fupply of oxygen to the fystem is much diminifhed. His opinion originated from an obfervation, that nature in particular cafes fufpends the progrefs of phthifis pulmonalis, by the very means, which are calculated, he thinks, to diminifh the fupply of oxygen, viz. in cafes of pregnancy. As the fœtus, he remarks, receives from the mother that proportion of oxygen which is neceffary to its exiftence, while at the fame time there is no apparent provision for an extraordinary fupply of it to the mother ; it follows, that, during pregnancy, the fystem of the woman muft receive a lefs quantity of oxygen than ufual.

Although this ingenious hypothefis be exceedingly plaufible, it is by no means fatisfactory. That pregnancy does not always fufpend phthifis pulmonalis muft be allowed by every practitioner ; and that it generally accelerates inftead of retarding the progrefs of the difeafe, has been already alledged by the author of thefe remarks. Befides, the fuppoftion of a larger quantity of oxygen than ufual being tranfmitted into the blood, by lungs fo much difeafed as to be incapable in general of admitting above one fourth of the ordinary quantity of air, is inconfiftent with the common opinion
refpecting

respecting the functions of the lungs, the opinion which Dr. Beddoes himself adopts. For if the lungs, in a healthy state, be designed to combine with the blood the oxygen contained in the atmospheric air received into those organs, it is surely unphilosophical to imagine that a diseased state, which prevents not only the admission of the usual quantity of atmospheric air into the lungs, but also the free transmission of the blood through them, should render them capable of combining an increased quantity of oxygen.

AN hypothesis of a different nature, founded too upon chemical principles has been suggested by Dr. Reid, viz. That the diseased state of the lungs prevents the expulsion, during respiration, of the phlogiston and lymph generally thrown off by that operation *. Changing the terms employed by Dr. Reid for those now used, his hypothesis seems to be, That the diseased state of the lungs prevents the admission of oxygen; which is directly opposite to Dr. Beddoes' opinion. An objection, however, immediately occurs against this opinion, which is, That, were it just, phthical persons should be always cold, in the same manner as the blue boy, mentioned by Dr. Sandysford, the right ventricle of whose heart opened into the aorta,

* Vide, An Essay on the Nature and Cure of Phthisis Pulmonalis, by T. Reid, M.D. first edit. p. 58. et seq.

ta, so that a small quantity of blood only passed through the lungs; whereas, such patients are, on the contrary, always affected with much heat.

What then is to be regarded as the proximate cause of phthisis pulmonalis? Since the deranged structure of the lungs produced by the exciting causes of the disease neither prevents the admission of oxygen, nor promotes an increased supply of it, at least in so far as has been hitherto proved; may it not be probable that it acts by subtracting the nutritious part of the blood?

REMARKS ON THE CASES OF PHTHISIS PULMONALIS.

Cases of Phthisis a Tuberculis. In the first case, the resemblance between the tubercles and glandular bodies is clearly marked by Morgagni.

The third case affords an example of the complication of phthisis and tabes mesenterica. The similarity noticed between the tubercles in the lungs, and the protuberating bodies on the surface of the peritoneum, omentum, intestines, &c. and the similitude of those bodies to glands, are strong circumstances in favour of the opinion that tubercles are of a glandular nature.

The fourth case is remarkable from the ossifica-

tion which had been coughed up from the lungs. It is unfortunate that the hurried manner in which the body was examined prevented the seat of the bone from being discovered, and also rendered it uncertain whether there were in the habit a disposition to form ossific matter.

In the fifth case, the death of the patient seems to have been occasioned by the sudden rupture of the vena azygos, which was quite an accidental circumstance.

Cases of Phthisis a Materia Calculosa. The first case was so well marked, that, before the death of the patient took place, Malpighius foretold the appearances in his lungs.

In the second case, there were evident scrophulous tumours throughout the whole body; yet no tubercles appeared on the lungs, but on the contrary hard stony concretions. This shews that, although tubercles do not exist without scrophula, they are not the necessary consequences of that morbid state. The ossifications that appeared within the heart, in the third case, shew a coincidence between the disposition in the vessels to form bone, and to depomite calculous concretions.

§ 2. TABES MESENTERICA.

THIS disease begins with irregularity in the state of the bowels, sometimes obstinate costiveness taking place, and at other times, loose, slimy, unnatural stools being discharged. The appetite for food is very irregular; for sometimes there is a loathing at all kinds of food, and at other times a voracious hunger. The belly is generally swelled and hard; and where the disease occurs in children, it is always so. In such cases, too, hard knotty bodies often can be felt through the teguments of the abdomen. The whole body is by degrees emaciated. The skin is generally dry and hot. The mouth is parched, and constant thirst attends. The uneasiness is generally aggravated after taking food. Hectic fever, at first very irregular, and by degrees distinctly marked, at last supervenes. A remarkable appearance in the urine has been noticed, viz. that it is thick, and sometimes chylous*.

Tabes mesenterica most frequently attacks children; but as the succeeding case shows, it also oc-

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curs

* Vide Juncker's *Conspectus*, pag. 361; from whose description of this disease the above history is principally borrowed.

curs in adults. It is sometimes complicated with phthisis pulmonalis.

The appearances on dissection prove that the seat of the disease is in the glands of the mesentery. Those glands are found enlarged: they are sometimes so much indurated, as to resemble scirrhi; sometimes, on the contrary, they are quite soft and flabby; and sometimes they contain pus, mixed with a white soft curdly matter *.

CASE OF TABES MESENTERICA.

C A S E. (XXVII. 16.)

A BEGGAR, aged fifty years, who had formerly been a wool-comber, was found dead. He had been hectic for some time, and had been so much distressed with heat, that although it was the coldest season of the year, he had been accustomed to lie naked upon some straw in a hut, and in this situation he was found.

Appearances on Dissection.

ABDOMEN. A larger than ordinary proportion of fluid was observed in the cavity of the belly. The stomach was very much distended, and on the superior part was covered by the omentum, which
was

* Vide Baillie's Morbid Anatomy, pag. 134.

was in a great measure drawn upwards. The stomach contained a considerable quantity of air, and a small proportion of urine, with the colour of which the internal surface was tinged. The mesenteric glands, both in the center of the mesentery where they were collected in the form of a double cluster of grapes of a moderate size, and also in other places here and there, where they were perfectly distinct, were much larger than usual, and somewhat indurated. Although the liver was of a moderate size, the spleen was very small; but the splenic artery was of a larger size than in proportion to that of the spleen. The other abdominal viscera were in a natural state.

THORAX. The heart was not small, but was flabby. A pretty large bony scale appeared externally nearly in the middle of its posterior surface, and a smaller scale of the same kind was seen likewise externally on the right auricle. The internal surface of the aorta, behind the semilunar valves, was marked with whitish spots.

CAUSES OF TABES MESENTERICA.

PREDISPOSING CAUSE. It has been generally imagined, that a scrophulous habit of body is the necessary predisposing cause of tabes mesenterica; and it must be confessed that the appearance

of the ordinary subjects of the disease, seems to confirm this opinion. Both Sauvages and Dr. Cullen, however, believe that the disease sometimes occurs in those who have never had any symptom whatever of scrophula*.

EXCITING CAUSES. Bad diet and inattention to cleanliness, have been commonly regarded as the exciting causes of this disease. But it is not easy to understand the exact manner in which those circumstances can produce swelling, induration, or suppuration of the mesenteric glands.

PROXIMATE CAUSE. The obstruction of the mesenteric glands, by which a due supply of chyle is prevented, is obviously the proximate cause of *tabes mesenterica*.

ANOMALOUS CASES OF TABES.

CASE I. (XXIX. 12.)

A WOMAN, aged forty years, who had been accustomed to live chiefly upon salt victuals, and to drink plentifully of wine, had been for many
years

* Vid. Sauvages Nosol. Med. tom. 2. p. 449; and Dr. Cullen's First Lines, par. 1556.

years subject to pains of the stomach. Impaired appetite for food, nausea, and soon after, repeated vomiting of blood, together with constant fever, restlessness, and thirst, supervened to these pains. Although no hardness could be perceived in the belly, yet a certain uneasy sensation was from time to time felt in the region of the stomach during the absence of the severe pain, even though no pressure were made. She complained also of pain in her loins; but it was only when she had been working more than usual, or had been carrying some burden. Along with all those complaints, she was sometimes affected with a very severe pain in the head. Whenever these symptoms became violent, more especially the stomach complaints, she received considerable relief from blood-letting. She seemed, too, to derive much benefit from drinks, in which a piece of bread only had been boiled. She appeared also, more than once, to have become convalescent from the daily use of milk diet, and her spirits were kept up by the regular appearance of the menses, which flowed at stated periods, till the time of her death.

At last a hard tumor appeared on each side above the clavicles, at that part where the external jugular vein passes. These tumors occasioned considerable pain, and as they did not yield to any remedy, but on the contrary, increased daily, they

they rendered the respiration difficult. Along with those symptoms, she had constant fever, which, preceded by a slight chilly fit, increased always towards the evening. She complained of pain in her head; and the pain in her stomach was constant, but was not now attended with vomiting of blood. She was perpetually distressed with thirst, and had a sensation of much bitterness in the mouth; from which organ, during the latter days of her life, a very fetid smell proceeded; but no pus was ever observed to be spit up. Under these circumstances, she dragged out a miserable existence, much longer than from the small and feeble state of her pulse could have been expected. Her pulse for the last fifteen days, during which time she took nothing but a little broth and some wine, became smaller and more frequent. At length she died.

Appearances on Dissection.

EXTERNALLY. The carcase was very lean.

ABDOMEN. The omentum was rolled up towards the upper part of the abdominal cavity, in such a manner, that the transverse arch of the colon, which commonly lies under the stomach, appeared immediately under the umbilicus. It might have been forced into this situation partly by the stomach, as the left part of the 'fundus of that viscus descended lower than usual. The stomach externally, and particularly at one place to

a large extent, was of a livid colour. Its coats were thickened and indurated; except in certain parts, where they were so putrid that they were lacerated on touching them. Through these lacerations a very fetid cineritious matter, like a kind of poultice, which was contained within the stomach, was discharged. This fluid had burst into the stomach from a tumor or abscess of the worst kind, which had been situated on its posterior surface: for at that place the stomach was to a great extent immoderately thick, swelling inwards; unequal in its surface; in a filthy, rotten, and gangrenous state; and of the same colour as the above mentioned matter. The pylorus was found. All the intestines, the colon not excepted, were in a contracted state; which was to be expected after so long continued loss of appetite. The spleen, although found, was of a larger than ordinary size, and was internally of a pale colour. On the right side of the liver some scirrhosities, of a white colour, and roundish form, like common sized grapes, were observed. These were disposed over the surface in such a manner, that they were in some degree concealed within the substance of that organ. In cutting through the liver, one of these tumors, completely buried within its surface, appeared. The gall-bladder contained a large quantity of very yellow bile, which had tinged the neighbouring parts. On the posterior surface of the left kid-

ney there was an oblique line, of a considerable length, of a whitish colour, and of an apparently tendinous substance. This line penetrated to such a depth that it reached the tubulæ in which the papillæ are received. It had very much the appearance of the cicatrix of a former ulcer; but no mark of this could be discovered, neither in the surrounding adipose membrane, nor in the abdominal muscles. The uterus was small, and situated very low; and inclined so much towards the right side, as to be greatly nearer that than the left side. The round ligament, too, was much shorter on the right side than on the left. The cervix uteri, and more especially the os tincæ, were found nearly in the same state as in virgins; the former having, internally, the oblique and prominent rugæ, which characterise it; and the latter having a narrow and round aperture. The hymen, though small, was distinct, and exhibited no marks of laceration; but within the hymen, neither were the carunculæ myrtiformes observed, nor were the rugæ of the vagina distinctly marked. The skin too, at the lower part of the abdomen, being indented with whitish coloured pits, did not correspond with the appearances of the cervix uteri and hymen. The ovaria were of a large size, considering the age of the woman and smallness of the uterus. Externally they were wrinkled: internally, the left contained some small
empty

empty cells included within a thick white membrane ; and the right had, within a cell not much larger than these, some black coloured half coagulated blood. The right Fallopian tube was pervious to the ovarium, but impervious towards the uterus : the left, on the contrary, was open only towards the uterus. A considerable quantity of fat was observed in the mesentery, and in the interstices of the muscles of the back and limbs ; and a small quantity also in the omentum. This was surprising in so lean a subject ; but indeed it was a female one. The abdominal muscles were of a very beautiful red colour. Some glands, greatly enlarged, lay hid beneath the yellow fat contained in the mesentery, which covered the lumbar vertebræ and the trunks of the large vessels contiguous to them. These glands adhered so closely to those vessels, as to be separated with great difficulty. They were internally white, and not very hard ; and they contained purulent ichor. The other glands throughout the mesentery were not enlarged. Near the stomach, however, one of the lymphatic glands was observed to be much thicker and harder than ordinary : it was of a dirty yellow colour. The whole of the pancreas had become thickened, and at the same time somewhat dry and hard ; except in one part, which grew out into a white substance resembling that of the thymus gland.

THORAX. The two lowest jugular glands were of a white colour, and were enlarged to the size of two inches at least. These glands constituted the hard tumor on each side under the clavicles, mentioned in the history of the case. They were found to be considerably hard, although they contained a purulent ichor: part of this flowed out when the clavicles, under which, and on the contiguous part of the sternum, they lay, were removed. The other jugular glands also were in the same state, with respect to colour, hardness, and contents; but had not increased to so large a size. The axillary glands had undergone no change whatever. But those glands placed at the first division of the aspera arteria, were of a white colour; and, from a small size, had become not less than ordinary grapes. They were somewhat hardened too; and contained the same kind of purulent ichor seen in so many other glands. The aspera arteria, however, at least towards the throat, was found; as was also the œsophagus in its whole length. The lungs, which were turgid with air, were free from disease. A number of roundish tubercles, of a hard, compact substance, and of a depressed figure, so numerous as to be almost contiguous to each other, beset all the edges of the valvulæ mitrales. In one of the semilunar valves a small scale, not however bony, was observed. In other respects the heart was found.

HEAD.

HEAD. The brain not only was not flabby, but even approached towards hardness: it was in a natural state, except that a small quantity of pellucid fluid was found in the lateral ventricles, and that the plexus choroides were pale. The pineal gland was somewhat more firm and globular, and of a whiter colour, than it usually is.

C A S E II. (XLVII. 4.)

AN unmarried woman, who had for many years had no menstrual discharge, and who had been long troubled with ulcers in the legs, having become hectic, died.

Appearances on Dissection.

ABDOMEN. A considerable quantity of effused fluid was found in the belly. On the internal surface of the uterus, a great number of protuberant apparently glandular bodies were observed; there were few, however, towards the fundus. The ovaria contained no vesicles, and consisted of a whitish substance similar to that of the pancreas, except that it was of a softer consistence.

THORAX. A quantity of effused fluid was found in the chest, as well as in the belly.

C A S E III. (XLIX. 16.)

A MAN who was greatly emaciated, and was by

some deemed affected with phthisis, was brought into the hospital of Padua, where he died.

Appearances on Dissection.

ABDOMEN. All the viscera were found:

THORAX. The lungs and other contents of the chest were in a natural state.

HEAD. The dura mater was very much thickened, and the brain was very flabby. It was found, on examining the superior part of the medulla spinalis, that the dura mater could not be so easily separated as usual; and that, in drawing it off from the contiguous membrane, much caution was necessary in order to prevent laceration.

The skin in this subject was very hard, as it commonly is in tabid bodies.

C A S E IV. (XLIX. 18.)

AN old man, who was very much emaciated, died, it was said, in consequence of the marasmus incident to old age.

Appearances on Dissection.

ABDOMEN. The mesenteric glands were not so small as they generally are at that age. A great number of glands, of a large size, both with respect to thickness and to length, some of them being two or three inches long, were observed about the iliac vessels from their origin quite down to the thighs. These were placed in such a manner, that

they seemed to cover the iliacs, like a continued chain ; and pressed upon them so much, that the parietes of those vessels appeared somewhat inflected and varicose. When cut into, these glands did not appear different from the natural state of lymphatic glands. The spleen, though rather small in its other dimensions, was thicker than usual, especially about the middle. The membranous bands by which it is connected to the diaphragm were also thicker than common ; and besides, its coat was not only likewise thick, but was also, in the centre of its convex surface, indurated for a space equal to a circle of two inches diameter, and in some part of that space it had become ossified. Internally, a trunk of the vessel, also indurated, belonging to the substance of the spleen, appeared connected to the same part. The splenic artery, for the extent of some fingers breadth from its origin at the cœliac, was somewhat narrower than natural ; but at the part where it begun to be contorted, as usual, it became wider. The urinary bladder, which was so much distended with urine that it appeared above the pubis, had its coats thickened. When compressed by the hand, the contained urine was not easily discharged ; nor was it possible by these means to force out the whole of it. This was probably occasioned by the state of the prostate gland ; for that body was enlarged, and protruded from the
internal

internal orifice of the urethra into the cavity of the bladder. It was externally of a brownish red colour. Within its substance, which was in other respects in a natural state, granules of a blackish yellow colour, like tobacco, were seen in several places.

THORAX. The heart was completely destitute of fat; its surface was of a dirty yellow colour, and was not smooth. The valves of the aorta were very hard: within the internal surface of that vessel itself, beyond the valves, large bony scales were observed. But in that part of the aorta situated in the belly, and in the iliacs continued from it, incipient ossifications, or white spots, only were found.

The carotid arteries had a singular appearance; having ascended one half of their height, they became contorted like a screw, and immediately after returned to their original straightness; and so obstinate was that contortion, that, although the arteries were drawn out into a straight line, they assumed their original form the instant they were left to themselves.

C A S E V. (LXV. 3.)

A MAN, aged forty-four years, having been at a distance from his own home, in a mountainous and uncultivated country, had taken, on account
of

of a slight gonorrhœa, many mercurial medicines. Although these medicines were probably ill prepared, he could get no other in that country. While using those remedies, his stomach was very often irritated, and vomiting frequently took place. From that period, he began to vomit almost every thing which he eat or drank; and if he did not vomit, he became very much distressed with a pain in his stomach, which he felt at all times in a slight degree; and also with hiccup. When he took food immediately after vomiting, he most generally retained it. He had a large discharge of thick ill-smelling saliva. His belly was costive; and when glysters of milk were used, nothing was expelled but hard excrementitious lumps. Although the pulse was not at first affected, yet there was a considerable emaciation of the body from the beginning. Many different medicines were employed, but in vain; for he at last died.

Appearances on Dissection.

ABDOMEN. The pylorus of the stomach was very narrow and very hard. Near it there was a small ulcer; on the other parts of the internal surface of the stomach several bodies like glands were scattered here and there.

CASE VI. (LXV. 5.)

AN old woman, who had been long affected
with

with an obstinate diarrhoea, attended with a great loss of flesh, became at last reduced to a state of extreme weakness; and in this situation died.

Appearances on Dissection.

ABDOMEN. Instead of the adipose membrane placed under the skin, which is very rarely wanting even in the most emaciated women, a thin membrane like net-work, scarcely retaining the smallest vestige of fat in any part of it, was observed. In the belly neither was there any ill smell, nor could any remarkable appearance at first sight be discovered, except that the bile in considerable quantity and of a deeper than ordinary colour, contained in the gall bladder (which was pretty large, and extended considerably below the liver) had tinged its contiguous parts more extensively than common. Neither the small intestines, nor the stomach, which was in a contracted state, were in any degree diseased. Some parts of the internal surface of the large intestines, especially about the cœcum and colon near the valvula coli, were red from inflammation. The rectum was quite livid from previous inflammation, and on its internal surface it was in several places, especially towards the inferior part, swelled out. On the swelling at the lower part, a spot was observed extending upwards the length of a finger's breadth. This spot was soft and prominent, appearing as if it were formed from some half coagulated

gulated blood placed under the internal coat of the intestine. Above this part, several bodies, either true lenticular glands, or of a similar nature, of a reddish or rather brown colour, appeared dispersed up and down. Some of the mesenteric glands, although of a sound texture, seemed of a larger size than is common at that age. The trunk of the aorta was somewhat hard in several places, and on its internal surface was of a whitish colour, in consequence of many incipient ossifications. On the internal surface, too, the posterior and lateral portions of the vessel formed, by their junction, an angle instead of a curved line.

C A S E VII. (LXX. 5.)

A PORTER, aged fifty years, who had been greatly addicted to drinking, and accustomed to indulge in much eating, was affected, three months previous to his death, with a tertian fever. This man, not only had not been a valetudinarian, but had even been in perfect health, except, as was learned from his companions, that now and then he complained of a pain situated in the epigastric region, about the scorbiculus cordis. When the fever began to abate, he became subject to vomitings; which disappearing for some time again, returned and continued to trouble him during the rest of his life. He never vomited any thing but

his food; and when vomited it had never any bad smell or taste. During the last month of his life, he could retain nothing on his stomach but muscadine wine, which was given by way of cordial. In consequence of this, he became hectic, and had a great wasting of flesh. Every medicine, both internal and external, that was employed to check these vomitings, proved ineffectual. Among those, quicksilver was used, to the quantity of three ounces, about a month before his death, when an obstinate costiveness afforded reason to apprehend iliac passion. This medicine neither proved of any advantage, nor was afterwards seen during the operation of clysters; but it was supposed by the attendants, to have been afterwards discharged along with the faeces, when the stricture of the bowels was removed. Under the symptoms above stated, he died, never having complained of any tumor or pain in the belly; his pulse also having never been much affected, except only that it now and then intermitted.

Appearances on Dissection.

EXTERNAL APPEARANCES. The body was so exceedingly emaciated, that on the back of the hands, and on the upper part of the feet, the bones of the metacarpus and those of the metatarsis could have been very well demonstrated; and the eyes were, in consequence of the deficiency of fat in the posterior part of the socket, most
astonishingly

astonishingly sunk. From the lobe of the left ear, a slender brass ring depended, which is commonly the mark of a previous disorder in the neighbouring eye, but both eyes were in a sound state. As the mouth happened to be open, it was observed that there were but few teeth in the jaws.

ABDOMEN. The intestines were here and there marked with livid spots. They were unusually contracted, the natural consequence of the daily vomiting. The large intestines, however, were contracted for a short space only, as they contained fæces, though not in a large quantity. The stomach was in an unusual situation, of an uncommon length, and had a very peculiar position: For, beginning at the usual place, (no part of the œsophagus having passed into the belly) it proceeded through the left side of the belly, in a strait line, down as far as the pubis; from whence it turned upwards towards the right side, and terminated in the duodenum. It was of a moderate breadth; and contained nothing but a thin poul-tice-like mass, which was supposed to be the remains of the little food that had been taken in. When the pylorus was handled, externally a considerable hardness was felt. On opening the stomach, the ring of the pylorus was observed to be divided as it were into two or three protuberances, which, although not large, were hard. That part of the stomach next the pylorus was indurated to

the extent of two fingers breadth; the coats being there thickened, and in a state approaching to the hardness of bone. They were not really ossified, nor did they straiten the passage; but, in consequence of their unyielding state, they had been incapable of propelling the food into the duodenum. For a short space from the indurated portion, the internal surface of the stomach was slightly livid. It is probable that the stomach contained quicksilver, which had flowed out when that organ had been moved to one side; for it was found, to the quantity of an ounce and a half, within the duodenum, which had been tied up a little below the pylorus. It was not observed in any of the other intestines. The urinary bladder contained little urine, and was in a sound state; as was also the urethra; but no vestige of the small, oblong, oval protuberance, generally placed at the beginning of the urethra, could be traced at that part. The slender line which terminated as usual in the verumontanum appeared.

THORAX. The heart, as might be expected, was destitute of fat; but, what was very remarkable, more especially in a man who was of a tall stature, who had been always employed in a laborious manner of living, and who had been accustomed to lift heavy burdens, it was so small, that it appeared rather to be the heart of a child than that of a man. All its dimensions, as well

as the thickness of its parietes, were in exact proportion to the smallness of its size. No disease appeared, externally nor internally; except that the superficial veins were in some parts varicose. Although the trunk of the aorta seemed to be dilated, the valves were in a natural state. The diaphragm had become ossified at the right side of the centrum tendineum; or at least, at that part, a bony lamina, of some thickness, measuring an inch and an half in length, narrow at one of the extremities, and becoming gradually wider at the other, but no where exceeding a finger's breadth in width, was placed between the pleura and peritoneum.

HEAD. A small quantity of fluid was found in the lateral ventricles. On the choroid plexusses, within the lateral ventricles, where they are reflected upwards at an angle to cover the thalami nervorum opticom, a pretty large hydatid, appearing at first like mucus, was observed. The pineal gland seemed very small: it contained a corpuscle, which, in proportion to the size of the gland, was not inconsiderable. This little body was of an irregular figure; was hard, not friable, and was of a dirty yellow colour. The medulla spinalis was very flabby.

C A S E VIII. (XXXIX. 14.)

A SLENDER woman, of about forty years of age, who had been much subject to hysteria, and particularly to violent hysterical paroxysms, which affected her whole body, and more especially the viscera of the abdomen, with convulsive motions, after having had some fits that were more violent than usual, began to observe an evident depression in the epigastric region, and at the same time a swelling in the hypogastric. The depression never changed; but the swelling often altered within the space of a single day; for, although it appeared large and very hard, it often suddenly subsided. When she took food, she observed that it descended into that part and increased the swelling, and also rendered the sensation of weight which she always felt there more uneasy. At the distance of four or five hours from that time, she usually became affected with violent pains, tormina, and faintings. She often complained that all her bowels had fallen out of their proper situation, as she expressed it. Her digestive powers were obviously impaired. She was feverish, and was much emaciated. Having lived in this manner for three months, she died.

Appearances on Dissection.

ABDOMEN. The stomach was found to have fallen

fallen down into the epigastric region; so that there was scarcely four fingers breadth between it and the pubis. That part which is connected to the œsophagus was so much elongated, that the whole fundus of the stomach lay in the epigastrium.

C A S E IX. (XL. 23.)

AN old man, apparently sixty years of age, who was so very beggarly that he was forced to pick up a miserable subsistence from the outer rinds of melons, or any other substance thrown into the street, having become affected with fever, together with a sense of oppression in the chest, attended by difficult respiration, weak pulse, constant cough, and the expectoration of catarrhus matter, was received into the hospital of Bologna, where he had formerly repeatedly been. After he had felt himself considerably relieved, he went out again into the streets; but within a short time he returned into the hospital. He was then so much emaciated, and so much exhausted by disease, cold, and hunger, that he died soon after his admission.

Appearances on Dissection.

ABDOMEN. The stomach was large, although it contained almost nothing. Internally it had no rugæ; and was of a brownish colour, here and
there,

there, for a considerable space, from the middle towards the left side, and especially towards the œsophagus, where the brown colour penetrated more deeply. The whole convex surface of the liver, except a small space at the lower part on the right side, adhered firmly to the septum transversum. In that part, the surface was hollowed out by an hydatid of the diameter of a finger's breadth. The membrane of the convex surface of the spleen was in one part of a white colour, and the middle of that part was become bony to a small extent. The spleen itself was of a softer consistence than usual, and was larger rather in thickness than in length or breadth. The splenic artery, however, appeared wider than even that increased thickness required. The mesenteric glands were very distinct, although in a man of that age. Many of them were of the size of a bean; but, when examined accurately, they were found to be certainly free from disease. The size of the kidneys was unusually small in proportion to that of the body. The appearance of their surface was uncommon; for they were equally convex on the posterior as on the anterior surface. Both surfaces were unequal, and in some degree knotty; and more especially in the left kidney. That kidney too exhibited certain depressions as if from cicatrices. The orifices of the ureters within the bladder seemed larger than usual. The bladder itself internally

was of a red colour; and was here and there marked with sanguiferous vessels, which were as distinct as if they had been filled with coloured wax. Externally it was furnished with redder fibres than usual. The iliac arteries were tortuous, as the splenic artery generally is. The iliac veins, as far as their division, were so much corrugated, as it were, that they could be extended with difficulty.

THORAX. Within the thorax, as well as in the pericardium, a small quantity of watery fluid was found. The lungs were attached firmly to the sides and to the back. The right lobe, when drawn away, left a kind of opaque, thick, firm, uniform coat, adhering to the parietes of the thorax, extending from the lower part to beyond the middle of its length, and from the spine almost to the sternum. This membrane, when pulled by one extremity, and by the part attached to the sternum, was drawn off entire. It neither belonged to the pleura, nor was it the membrane of the lungs; for both these parts remained in their natural situation. It was therefore probably a membrane formed in consequence of inflammation. The lungs themselves were not very found. In the upper part of one of the lobes a hard substance was perceived. The heart was twice as large as it naturally is: it contained no blood, but only a few moderately sized polypous concretions. Both ventricles were dilated. The right ventricle, and the

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corresponding auricle, which was also much dilated, had very thin parietes; on the contrary, the parietes of the left ventricle were thicker and harder than usual. The valvulæ mitrales were enlarged, and their lower edges were much thickened and knotty. The sigmoid valves were not so soft as usual; and the semilunar were still less yielding; one of them being already bony at one part of its lower circumference. The aorta, before its curvature, was wider than usual. The whole of its internal surface was marked here and there with white spots; and the same appearance was observed within the iliacs. Some of these spots appeared prominent on the internal surface, and were very hard and bony. This was more especially the case at that part from whence one of the inferior intercostals went off. The orifice of that vessel, happening to lie in the center of the spot which protuberated in a circular form, had been in consequence so straitened, that, together with the spot, it at first sight appeared like a large lenticular gland.

CAUSES OF HECTIC FEVER.

PREDISPONENT CAUSE. Daily observation proves that persons of a scrophulous habit are chiefly predisposed to hectic fever; but, as it is well known
that

that those of a different habit are also liable to the disease, scrophula cannot be considered as the sole predisponent cause. In every case, the disease is preceded by general debility of the system. It may therefore be probable, that the effects of the exciting causes cannot take place unless the body be in that state. It must be confessed, however, that this mode of reasoning is not perfectly satisfactory.

EXCITING CAUSES. An author of the highest eminence has alleged, that the absorption of purulent matter is the sole exciting cause of hectic fever* ; while another, of considerable respectability, has denied that the disease is ever produced (at least in phthisis pulmonalis) by that cause†. Both are certainly mistaken : for, unless the evidence of the senses be entirely laid aside, it cannot be doubted that hectic fever is very often induced by the absorption of pus ; but, on the other hand, it must be also allowed that the disease sometimes occurs where no pus could be absorbed.

Suppuration in the lungs, in the liver, in the mesenteric glands and other abdominal viscera, in the external parts of the body, and throughout the whole system, as in cases of small pox, &c. often act as exciting causes of this disease ; but, as they do not

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uniformly

* Dr. Cullen's First Lines, par. 861.

† Vide, An Essay on the Nature and Cure of Phthisis Pulmonalis, by T. Reid, M.D. first edition, page 39, et seq.

uniformly produce the effect, it has been supposed that some peculiar state or condition of the matter absorbed is requisite for this purpose *.

In those cases where this fever cannot be traced to the absorption of purulent matter, all the various circumstances from whence the disease can be thought to originate, tend uniformly to produce one effect, viz. the prevention of a regular supply of chyle. Thus, obstructions of the mesenteric glands, indurations of the stomach and other chylopoetic viscera, excessive habitual evacuations, great irregularities in diet, as frequent drunkenness, and long continued affections of the mind that impair the appetite for food, as immoderate grief, which have been long acknowledged by practitioners to be occasional exciting causes of hectic fever, agree only in one respect, that of preventing the ordinary supply of chyle.

On the whole, therefore, it is presumed that the absorption of purulent matter, and every circumstance which tends to prevent the formation or the supply of chyle, occasion this disease.

PROXIMATE CAUSE. From the phenomena of hectic fever, the proximate cause has been generally supposed to be irregularity of action of the vascular system in consequence of an acrimonious state

* Vide, Dr. Cullen's First Lines, par. 861.

state of the blood. This opinion, however, is neither satisfactory to the theorist, nor useful to the practitioner. As the qualities of the blood are not yet accurately known, it may indeed be urged that it is not easy to employ any other epithet than that of acrimony, for expressing the particular condition of that fluid which excites irregular action of its containing vessels. It is probable, however, that in the present instance a more accurate expression may be adopted. That the blood cannot perform its natural functions, unless it be constantly supplied with oxygen and with chyle, is generally believed; and that hectic fever is occasionally produced by circumstances which prevent or diminish the supply of the latter fluid, has been proved: May it not therefore be concluded, that the morbid state of the blood, in the disease under consideration, consists in a deficiency of chyle? If this were admitted, it would follow as a consequence, that the absorption of purulent matter, where it proves the exciting cause, acts by destroying the properties of the chyle. As an objection to this explanation, it may perhaps be alleged, that the disease is commonly aggravated after meals; whereas, were the hypothesis now offered just, it should be always alleviated at those times. In reply; it may be observed, that the circumstance which furnishes this objection has not been universally acknowledged by practitioners;

ers * ; and therefore cannot be assumed as a principle.

REMARKS ON THE ANOMALOUS CASES OF TABES.

THE first, fifth, seventh, eighth, and ninth cases, afford strong presumptive evidence in favour of the idea, that hectic fever is immediately produced by a deficiency in the supply of chyle ; for in all of them the principal morbid appearance occurred in the stomach. Thus, in the first and fifth cases, that organ was ulcerated ; in the eighth, it was enlarged, and had its situation altered ; in the ninth, its internal surface was diseased ; and, in the fifth and seventh, the pylorus was indurated. In the sixth case, it is probable that the disease was occasioned by the long continued diarrhœa ; which gives additional support to the same opinion :

Could the swelling and suppuration of the lymphatic glands, which were noticed in the first case, proceed from the ulceration of the stomach ?

The second case is an example of hectic fever complicated with dropsy.

The causes of the disease in the third and fourth cases are quite obscure.

C H A P.

* It is denied by Dr. Cullen, First Lines, par. 859.

CHAP. II.

INFLAMMATIONS.

GENERAL OBSERVATIONS ON INFLAMMATION*.

INFLAMMATION† consists of an increased action of the arteries, together with such an augmentation of blood within them as occasions the sensation of heat and pain. An external part of the body therefore is said to be inflamed, when the action of its vessels is increased, and when it is red, hot, painful, and swelled. Although inflammation be local, yet if it be considerable, or feated

* In this part of the work, inflammation situated within the head, neck, chest, and belly, is alone to be considered. Previous to that, it appears necessary to offer some observations on the nature of inflammation in general.

† On the subject of inflammation the reader may consult the Works of the late Dr. Whytt, page 211; M'Bride's Works, 4to edit. page 157; Dr. Cullen's First Lines, par. 2, 35, &c.; and an Essay by Dr. Carmichael Smith, in Med. Communications, vol. ii. page 168, from which the principal observations here offered are borrowed.

ed in internal organs, the action of the whole vascular system is accelerated : consequently the inflammation of an internal part is indicated, by pain and interrupted function of the affected organ, increased heat of the whole body, and accelerated action of the vascular system.

The phenomena of inflammation are different, according to the nature of the exciting cause, the function or use of the part inflamed, and the natural or acquired texture of the same.

The inflammation produced by many of the exciting causes, although left entirely to nature, frequently terminates favourably, running a certain course ; while that excited by others cannot be overcome by the natural powers of the constitution.

The function or use of the part inflamed influences the phenomena very considerably. Thus it is obvious that the inflammation of the stomach and bowels must be attended with some symptoms which do not appear in that of the hands or feet.

The natural texture or structure of the inflamed part occasions much variety in the phenomena. The inflammation of the skin, of the cellular membrane, of mucous membranes, of diaphanous membranes, and of muscular fibres, is accompanied in each case with different symptoms.

The last circumstance mentioned as influencing the

the phenomena is, the texture of the organ having been previously altered by the disease. The best illustrations of this occur in the cases of scrophula and tubercles in the lungs.

Besides these circumstances, which are enumerated by Dr. Carmichael Smith, it is probable that the phenomena of inflammation are affected also by the state of the vessels that constitute the disease.

The seat of inflammation is the arterial system chiefly; but the incipient branches of the veins also generally appear unusually distended; and the capillary vessels, and sometimes too the lymphatics, are loaded with blood.

CAUSES OF INFLAMMATION.

PREDISPOSING CAUSE. Although it be very obvious that the application of certain exciting causes produces inflammation in almost every variety of habit; yet it cannot be doubted, not only that some persons are more susceptible than others of the impression of those causes; but, also, that there are particular states of the system, which render an individual more readily affected by them at one time than at another.

Persons of a rigid fibre, and of a sanguine temperament, and those who indulge much in the

use of animal food and strong fermented liquors, are particularly liable to inflammation. Plethora seems a great predisponent cause; but it may be the effect of a peculiar state of the vessels, which ought rather to be considered as such. Women are less predisposed to inflammation than men.

Besides the circumstances which render an individual subject to inflammatory complaints in general, there must be others which determine the seat of inflammation. Thus, of two persons exposed to cold, one shall have cynanche tonsillaris, and the other pneumonia. This must depend upon some state of the vessels of the affected part; but the precise nature of that state is involved in much obscurity. Some authors have imagined that it consists in an increased tone or contractility of the muscular fibres of the arterial system*. Others, on the contrary, regard it to be quite the reverse. The most plausible argument in favour of the latter opinion is, that parts which have been once inflamed are exceedingly apt to be again similarly affected. Still, however, the question does not appear to be satisfactorily solved.

EXCITING CAUSES. Every circumstance which either renders the part acted upon unusually affected by its ordinary stimuli, or increases the
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* Vide Dr. Cullen's First Lines, par. 247.

number or power of the stimuli applied to it, has been regarded as an exciting cause of inflammation *. This is a very ingenious arrangement, but a more minute one is necessary for the explanation of the phenomena.

All the exciting causes of inflammation may be arranged under the following heads: Mechanical Stimuli, Chemical Stimuli, or those which do not act mechanically, an Increased Degree of the Ordinary Stimuli, Diseases of the General System, and Certain Degrees of Cold.

1st, *Mechanical Stimuli*, include blows, whether attended with division of parts or not; and obstruction to the course of the blood, from pressure, &c. where it excites pain, or irritates the vessels.

2dly, *Chemical Stimuli* comprehend not only chemical stimuli properly so called, as caustics, &c. but also all the stimuli, the operation of which cannot be explained on mechanical principles. Such are certain poisons generated in the bodies of animals, either naturally or morbidly; as the venom of insects, and what is termed the venereal virus, &c.

3dly, *An Increased Degree of the Ordinary Stimuli of a part*. Thus light produces inflammation

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* Vide Tentam. Med. Inaug. quædam de Inflammatione complet. auctore Rich. Fowler, Edinburgi 1793, p. 4.

of the eyes, when applied in a degree to which the eyes have not been accustomed.

4thly, *Diseases of the General System.* Under this head may be classed fevers, and cases where the fluids are impregnated with poisonous matter, such as the contagion of small-pox, &c. and also cases where the component parts of the blood are not in due proportion to each other.

Lastly, *Certain Degrees of Cold.* It is not easy to explain the precise degrees of cold which produce inflammation. Experience shews that those degrees vary according to the previous state of the system. Thus, if the body be passed suddenly from a very warm temperature to a cold one, as for example, from one of seventy degrees of Fahrenheit, to one of thirty-five or forty, inflammation will be induced. But if the change from these degrees be made gradually, no such effect follows. Some degrees of cold are productive of mortification; and it has been supposed, that the degrees immediately preceding those in the scale excite inflammation.

The heat of the human body may be diminished either by the temperature of the air by which it is surrounded, or by the application of moisture of a lower heat than that of the body.

It has been alleged that the subtraction of heat, or according to common language, the application of cold, causes inflammation, by stopping
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the perspiration ; but it is probable that it generally produces the effect of exciting the vessels into unusual action.

PROXIMATE CAUSE. Although many theories have been proposed on this subject *, three only seem to merit any attention. *First*, That along with increased action of the blood-vessels there is a spasmodic stricture on their extremities ; *Secondly*, That, besides the action of the vessels being increased, the resistance to the course of the blood is diminished ; and *Thirdly*, That the action of the vessels is impaired, from their coats being in a debilitated or paralytic state.

The first of these theories is adopted by Hoffman and Dr. Cullen. The chief arguments in its favour are, that every considerable inflammation is preceded by a cold fit, and is accompanied with other symptoms denoting spasm on the extreme vessels ; and that the most effectual means for the cure of inflammation are those which are calculated to moderate the action of the vessels, and to induce relaxation over the whole system. But as the beginning veins of an inflamed part are in a state of over-distension, as well as the arteries, it
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* A view of the various hypotheses of inflammation is exhibited in Meza Compend. Med. Pract. Fascicul. ult. Inflam. et Dolor, Sist. in præfat.

is evident that there can be no spasmodic stricture, such as is supposed by this hypothesis.

The second opinion has been particularly recommended to notice by Dr. M'Bride*. That the action of the arteries in the affected part is encreased, cannot possibly be doubted: it is proved not only by the nature of the exciting causes, but also by the phenomena of the disease. The circumstances which seem to show that the resistance to the course of the fluids is diminished, are, the effect produced by cupping glasses applied to the surface of the body, viz. Temporary Inflammation, the same event following the application of warm water or emollient poultices to particular parts; and the well known tendency of the blood to push towards the weakened part, wherever the coats of a vessel are divided. It remains however to be ascertained, whether increase of action be compatible with a weakened state of the vessels. In order to judge of this, it is necessary to recollect, that the parietes of the arteries are composed of three coats, viz. a tough membranous one, commonly called elastic, a muscular one, and a smooth thin membranous one; that these coats are supplied with blood-vessels; and that the action of the arteries depends very much, though perhaps not solely, upon the influence of the nervous

* Vide quarto edition of Dr. M'Bride's Works, p. 159. et seq.

vous system. Now the question is, Whether it be possible for the muscular coat to possess an increased power, while the elastic one is weakened? On theoretical principles this might be admitted: for the action of the elastic coat is purely mechanical; while that of the muscular one is, to a certain extent at least, influenced by the nervous system.

The third opinion has been lately offered by Mr. Latta*. The principal argument in favour of it is deduced from the swelling of the inflamed part; which, in his opinion, is owing to a partial stagnation of blood: so that there must of consequence be a deficiency instead of an increase of action. The phenomena of inflammation, however, are by no means consistent with this idea. The unusual heat of the part; the throbbing pain; and where these are considerable, the accelerated action of the whole sanguiferous system, clearly indicate an increase of action in the vessels. This is farther proved by the consequences of inflammation; for mucous membranes, when inflamed, afford a greater than usual quantity of their secretions; diaphanous membranes pour out an increased quantity of the thin fluid which they commonly secrete, and in cellular parts, a fluid, called

* Vid. A Practical System of Surgery, by James Latta, Surgeon in Edinburgh, vol. i. pag. 95.

called pus, is furnished by the vessels, differing in its properties from any of the natural fluids.

GENERAL PHENOMENA OF INFLAMMATION WITH- IN THE HEAD, CHEST, AND BELLY.

ALL the contents of the great cavities above mentioned are composed of three different materials; viz. mucous membranes; what are called diaphanous membranes; and cellular and glandular substance. These materials exist either singly or combined.

First, The inflammation of mucous membranes differs from that of other parts, in being attended with little pain. It is distinguished by the sensation of increased heat and of soreness; and by the secretion of the membrane being changed in its qualities and appearance. In the healthy state, the mucous membranes, viz. all those lining the internal cavities of the body to which the air has access, furnish a mild transparent ropy fluid, like thin starch, quite insipid to the taste, and possessing all the qualities of mucilage. This fluid, when those membranes are inflamed, is of a very different nature. It is at first thin and acrid, frequently excoriating the very membrane by which it is prepared; then its quantity is increased, afterwards it is gradually diminished, and becomes

thick and opaque, resembling purulent matter; and finally, in favourable cases, it returns by degrees to its natural state. This, however, is not the uniform course of those changes; but it is unnecessary to enumerate the various deviations here, as they are stated under particular articles.

Ulcerations are the frequent consequences of this species of inflammation, and in some instances also gangrene.

The changes produced on the membranes themselves are an increase of thickness and sensibility, succeeded, after the morbid affection has ceased, by diminished energy and great susceptibility of inflammation from the slightest causes.

Secondly, What are called diaphanous membranes are, the dura and pia mater, the pleura, the pericardium, the peritoneum, the tunica vaginalis testis, the periosteum, and the capsular ligaments of the joints. The inflammation of these membranes is not marked by any peculiarity of symptoms, unless it affect the general system. It is then distinguished most commonly by acute pain of the affected part. This species, however, is chiefly characterised by the effects produced on the diseased parts: for these membranes, when inflamed, are found thickened, opaque, and sloughy, with a gelatinous or purulent exudation on their surface sometimes causing preternatural adhesions. At other times, the cavities which they invest are

filled with a turbid serum, with filaments floating in it. Sometimes this inflammation terminates in gangrene; but, except in such cases, there never is any loss of substance in the parts.

Thirdly, The inflammation of cellular and glandular parts, when seated externally, is very easily distinguished from every other species. It is attended with throbbing pain, and it terminates most frequently in suppuration or abscess. But when it occurs in internal parts, it is not discriminated with such facility. In general, it may be judged present, if, along with throbbing or fixed pain, increased action of the whole vascular system take place, and more especially if, under these circumstances, blood drawn from a vein exhibit what is called a buffy coat.

The parts affected with this species of inflammation, which is termed *Phlegmon*, are always swelled, from the extravasation or effusion of serum and lymph from the inflamed vessels, and also from the increased quantity of blood in those vessels.

The termination of this species is various. In some cases, the increased action of the vessels ceases, the effused fluids are absorbed, and the natural state of the part is restored. This favourable event is styled *Resolution*. In other cases, there is an effusion of a bland, opaque, yellowish fluid, somewhat like cream, called Pus. This is termed *Suppuration*. Sometimes, too, by some morbid

morbid affection of the vessels, the red particles of the blood, as well as the lymph and serum, are thrown out, and, instead of pus, an acrid corrosive fluid is formed, which destroys the neighbouring parts; and this termination is named *Gangrene*.

SECT. I. PHRENITIS.

PHRENZY occurs both as an idiopathic and a symptomatic disease. The former species seldom appears in this island, and the latter not very often.

The symptoms of idiopathic phrenzy are: violent headach, attended with acute inflammatory fever; a redness of the face and eyes, an impatience of light or noise, a state of constant watching, and the most furious delirium*. The vessels of the head are turgid; the temporal arteries throb; the eyes sparkle, and are violently agitated; the tongue is dry, rough, and of a yellow or black colour. The patient is outrageous by fits: he grinds his teeth; his hands tremble; and he makes frequent violent attempts to get out of bed. These symptoms are preceded by long continued

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* Vide Cullen's First Lines, par. 291, et seq.

and almost constant watching, or frightful dreams; acute pains, at first in the neck and occiput, afterwards extending to the head; no desire for drink; deep respiration; irregular pulse; suppression of urine; and inability to recollect circumstances that have just happened *.

Phrenitis is distinguished from mania, by the quickness of the pulse; and from that species of delirium which occurs in low nervous fevers, and is not produced by inflammation, by the appearance of the countenance and eyes. For, in true phrenzy, the face is red, the features are rather enlarged than shrunk, and the eyes protuberate and sparkle; whereas, in the delirium supervening to low fever, the face is pallid, the features are shrunk, and the eyes pearly.

Although it has been supposed that symptomatic phrenitis supervenes to fevers of every kind †, and to all inflammatory and painful complaints; yet it is probable it only occurs in the latter cases.

The author of these remarks has often seen phrenitis in lying-in women. He cannot however determine, whether it ought, under such circumstances, to be styled idiopathic or symptomatic.

* Vid. *Conspect. Therapiae Specialis*, auctore D. Joanne Junckero, pag. 520; from which the above description is chiefly taken.

† Vid. *Sauvage Nosolog. Method.* tom. i. pag. 458.

matic. In all the cases which he has attended, the disease occurred within forty-eight hours after delivery; and in all of them too it proved fatal before the end of the sixth day. In some of them the delivery had been natural, though tedious; while in others it had been exceedingly difficult. One of the patients had always had a strong predisposition to inflammatory complaints, and more especially to inflammation of the parts within the thorax. The phrenzy was uniformly preceded by watchfulness, quick hard pulse, and wildness in the eyes; and was ushered in by violent pain of the head, great susceptibility of the impression of light and noise, and a hurried mode of speaking. In every case the pupils of the eyes became quite dilated within forty-eight hours from the commencement of the phrenzy; so that the light ceased to make much impression. Throughout the course of the disease the pulse varied from one hundred and twenty to one hundred and forty, and at last it was intermitting and indistinct. It was very remarkable, that, until a few hours before death, there appeared to a superficial observer no morbid change in the features of the face; in so much, that it was difficult to persuade the attendants that any danger threatened. At that time, viz. six or eight hours previous to the fatal event, a very sudden alteration happened. The outrageous delirium at once ceased; the extremities

ties became cold ; the features of the face shrunk amazingly ; the eyes seemed fixed in their sockets, and had a peculiar shining appearance, as if covered with a glairy fluid. Partial sweats broke out on the face, neck, and breast ; stertorous breathing gradually commenced ; subsultus tendinum supervened : and the patient sunk. This disease was very accurately distinguished from puerperal fever, even at the beginning, by the absence of pain and foreness in the abdomen, and of uneasiness of breathing.

Symptomatic phrenitis is known to threaten in inflammatory or painful complaints, if, after continued watching or frightful dreams, pain in the head and tinnitus aurium take place, together with a peculiar wildness in the appearance of the eyes.

Phrenitis, whether idiopathic or symptomatic, is a very dangerous and alarming disease : for it generally proves fatal between the third and seventh day, and if protracted beyond that time it terminates in mania or fatuity. Amaurosis, too, has succeeded to an attack of phrenzy.

Sometimes however the disease ends favourably, by a critical discharge of blood from some part of the body, most commonly the nose ; or by an universal sweat, or copious diarrhœa, or even by deposition in the urine.

The unfavourable symptoms generally enumerated

rated are: æruginous vomiting, the discharge of white or grey coloured fæces, frequent attempts to spit on the attendants, convulsions, and sleep not preceded by a critical discharge. Subfultus tendinum, or convulsions, and coma, with cold sweats and fluttering pulse, announce the approach of death.

CASES OF SYMPTOMATIC PHRENITIS.

CASE I. (VII. 13.)

A MAN, of a tall stature and of a lean body, who had been subject to inflammation of the chest from dressing flax, which was his trade, after having been six or seven times affected with that inflammation, along with a vomiting of bilious green matter at one time, and delirium at another, had his voice at last so much injured, that he seemed to croak rather than to speak. On this account, he chose out hemp which contained the least dust, and dressed it in a separate place from his companions. By which means he had just recovered his natural voice, when, after having been fatigued with carrying a burden, he became affected with febrile coldness, and with a violent pain in the left breast. With these symptoms he was brought into the hospital of Bologna. Previous to this he had

had taken some almond oil, and had been bled from the left arm. As he breathed with difficulty, and had no expectoration, blood was drawn from the other arm. He lay most frequently on the affected side. He vomited bilious matter of a green colour. On the fifth day he became delirious; being sometimes merry, sometimes melancholic, and sometimes so furious as to spit upon those who approached him. Blood was drawn from his leg near the ankle; and a cataplasm, composed of new cheese of the coarsest kind mixed with oil of violets, was applied to his head after it had been shaved, and was ordered to be renewed three times a day. In the mean time convulsive motions, at first slight, and under the form of *subfultus tendinum* at the wrists, afterwards more considerable, were observed. At length, neither was his breathing difficult, nor did he complain of any pain or uneasiness; but, on the contrary, when questioned on that subject, he always answered in the negative. He sometimes however cried out; and made water involuntarily, so that he wetted the bed. His pulse having become weaker, though not irregular, he died about the seventh day.

Appearances on Dissection.

ABDOMEN. The stomach was found; the pancreas was somewhat hard, and rather thick. The edge of the liver superficially was livid to a considerable

derable extent. The gall-bladder was contracted, and contained a small quantity of bile of a faint tobacco colour.

THORAX. No serous fluid was effused into the cavity of the thorax. The right lobe of the lungs was in a natural state, except that it was everywhere closely connected, by intervening membranes, both to the ribs and to the diaphragm. The left lobe was connected to the pleura only in a few places on the fore part. Its superior lobule, though in other respects sound, was thin; and contained some purulent matter, of a white colour, in a kind of tubercle. These appearances, as well as the adhesions of the right lobe, seemed to be the effects of preceding inflammations. The inferior lobule was of a red colour; was hard, heavy, and of a compact substance; and contained in its superior part matter, or somewhat resembling matter, flowing through the branches of the bronchia. From these appearances present inflammation in the incipient stage of suppuration was indicated. The pleura also, on the same side, obviously appeared to be completely inflamed; for its blood-vessels were much more distinct than natural; and the whole membrane was drawn off from the ribs at a single pull. The diaphragm too, at that part of its centrum tendineum, which lies under the left lobe of the lungs, had its most minute vessels so much distended, that there could be no

doubt of its being there inflamed. The pericardium contained some turbid serous fluid, of a reddish colour. Through all the orifices of the heart polypous concretions projected. These originated in the ventricles, and extended into the vessels. They were all of a solid substance, except the beginning of that which went into the pulmonary artery; for the part of it within the right ventricle, though very thick, was composed of a yellow mucus-like substance.

HEAD. When the head was separated from the trunk, long portions of coagulated blood were drawn out from the jugular veins, as swords from their scabbards. The vessels of the meninges were exceedingly distended with blood. A polypous concretion, of a whitish colour, and compact structure, not only filled the sinus of the falx, but also extended into most of the veins which communicate with that sinus. Coagulated blood was also observed in the other three sinuses of the dura mater. The pia mater had all its vessels, even the most minute, so much distended with blood, that it was all over of a very red colour. Beneath it, on the convolutions of the brain, some serous fluid was observed. A small quantity of the same kind of fluid, of a reddish colour, was found in the lateral ventricles. Many hydatids, of a considerable size, were seen on the posterior part of the plexus choroides. Not only were the vessels

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on the surface of the lateral ventricles greatly distended with blood, being much more distinct than usual; but also vessels, equally full and distinct, appeared, on the slightest incision, through the corpora striata, the thalami nervorum opticorum, and throughout the whole medullary substance of the brain. In the cortical substance, however, both of the brain and cerebellum, the blood-vessels could scarcely be seen.

CASE II. (VII. 15.)

A WOMAN, after having been for a considerable time in the hospital of Padua, on account of a blow on the head, and after having been dismissed cured, became affected with fever and delirium; which terminated in death.

Appearances on Dissection.

HEAD. There was no where any particular mark of the blow which she had formerly received. On the internal surface of the dura mater, florid spots, like drops of blood, appeared. The vessels of the pia mater were distended with blood. Serous fluid was found in some places under that membrane, but not in the ventricles. Vesicles were observed in the posterior part of the plexus choroides. A little yellow coloured matter was situated at the fore part of the pineal gland. Every thing else was natural, except that the cere-

bellum was very flabby. No polypous concretions were seen in any of the vessels.

- C A S E III. (VII. 2.)

A MAN, aged seventy years, by trade a potter, naturally of a cheerful disposition, much addicted to drinking, after having undergone great fatigue in business, and suffered much uneasiness of mind, became affected with fever, attended with violent pain in his left side. He was received into the hospital of Bologna. Blood was immediately drawn from his left arm. On the fourth day, the febrile symptoms were much aggravated; and on the sixth he grew so delirious, that it was necessary to bind him down. His pulse was quick, but not irregular; his respiration was difficult; and he had no expectoration. Blood was that day drawn from his ankle. The symptoms however continued to increase in violence; so that on the following day he had stertorous breathing, attended with profuse sweat over his whole body, and soon after died.

Appearances on Dissection.

EXTERNALLY. The face of the carcase, and the superior extremities, were of a yellow colour, as in jaundiced persons; the other parts of the body, except the haunches, which were somewhat livid, were of the same colour in a slighter degree.

ABDOMEN.

ABDOMEN. The omentum was observed to be very short, and drawn upwards. The coat of the spleen, on the lower part of the gibbous surface, was exceedingly hard. The liver was connected to the diaphragm by its whole convex surface, except the edge and parts immediately adjoining. The edge and the greatest part of the hollow surface were livid, to the depth of two lines. The remaining part of the liver was of a pale colour, and variegated like marble; and the whole of its substance was a little hard. The bile in the gall-bladder was in small quantity, and resembled putrid blood, or water in which meat had been washed. Its passage into the intestines had not been obstructed; for the fæces were tinged with it. The intestines were distended with air. Yellow coloured fat adhered to their external surface, and a small quantity of serous fluid surrounded them in the lower part of the pelvis. The portion of the intestinal canal, and of the ureters which lay on the pelvis, was of a brown red colour. The urinary bladder was distended with urine; and as well as its contents was yellow. The sanguiferous vessels towards the cervix, both posteriorly and anteriorly, were turgid. On the right side of the fundus, two small cells, each capable of containing a large cherry, and each communicating with the bladder by an opening, the diameter of which was as large as a lupin, were observed. The parietes

rieties of these cells were of the same structure as the bladder itself. In the remaining parts of the fundus, the beginnings of other cells of the same kind could be plainly perceived. A great number of enlarged and thickened veins surrounded the right testis on all sides; and the substance of that body was so compact that its structure could not be developed as usual. Below the testis there was a small osseous body. The tunica vaginalis adhered to the right testis everywhere, except on the superior part, where there were two vesicles filled with a yellow coloured serous fluid. The same coat adhered also to the other testis, except at the epididymis, where there was a space filled with similar fluid. On examining the penis, no traces of frænum, except a small white mark, could be discovered. Nothing remarkable was seen in the urethra, but a few minute granules of concremented mucus, like the powder of tobacco, situated on each side of the feminal caruncles. These bodies too appeared as if glued down to the urethra. Throughout the prostate gland, especially on the right side, similar granules were found wherever it was cut into.

As far as could be learned, this man had never mentioned any complaint in the urinary system.

THORAX. The first circumstance which attracted notice was the appearance of the cartilages by which the inferior ribs are joined to the sternum

num on the right side; for they projected outwards, as if from something within. But, as nothing whatever was observed internally which could account for the phenomenon, it is probable that it had been occasioned by the great exertion of the right pectoral muscle during his youth, that had been perhaps necessary in acquiring the rudiments of the trade by which the man had gained his livelihood. Every thing was found in the right cavity of the thorax; but in the left, a considerable quantity of yellow coloured serous fluid was found. When this was removed, substances, as if pieces of a thick yellow reticular and easily lacerated membrane, appeared over the surface of the lungs. These membranous portions were in greatest quantity on the inferior surface of the lower lobe and between the lobes. Almost the whole of the inferior lobe was hard and heavy. On being cut into, its substance was found of an uncommon compact structure, more like that of the liver than of the lungs, and of a white colour. The inflammation seemed to have begun to terminate in suppuration; for thick white matter was pressed out from several small orifices, probably openings into the bronchia. The upper part of the superior lobe was distended with frothy blood, and was black and hard. The hardness appeared rather to have originated from some former than from some recent disease. The remaining
portion

portion was found. That lobe was connected to the pleura laterally and anteriorly, by many strong fasciculated fibres of a red colour, but apparently of a membranous nature. It also adhered very strongly to the pleura at the upper part of the pleura; was there thickened, and could be easily pulled away from the ribs; which could be still more readily done at the part where it lay under the inferior lobe. At that place, it was more thickened and of a deeper red. The external surface of the pericardium, on the left side, was of a red colour, in consequence of the small superficial vessels being distended with blood. Within the pericardium there was a small quantity of a yellow watery fluid. A thick polypous concretion was found in the right auricle; a similar substance, of a round form, was perceived in the pulmonary artery; and also one of the same kind in the aorta: and it appeared that, in the left auricle and ventricle, there were some similar ones. When these polypi were looked at longitudinally, their substance seemed composed partly of a soft yellow mucus, and partly of a reddish fibrous structure. On the internal surface of the aorta, above the valves, there were osseous lamellæ. The annular cartilages in the trunk of the aspera arteria, and in the beginning of the bronchia, were ossified in the middle part, by which they had a small degree of flexibility only; and when the ossified

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portions were broken, something like the rudiments of marrow appeared within them.

HEAD. A white, firm, slender polypous concretion was seen in the left lateral sinus, and also in the fourth and third, and in some of the veins communicating with the latter. All the vessels of the pia mater, on the left side of the head, and even where it enveloped the cerebellum, were so much distended with blood, that their trunks were turgid, and their smallest branches were conspicuous. There was a great quantity of serous fluid on the external convolutions of the brain, which shined through the pia mater, and resembled jelly. The ventricles were not entirely destitute of fluid. On the plexus choroides there were hydatids; but the plexuses were not discoloured. Neither the vessels which pass through the medullary substance of the brain, nor those which extend along the parietes of the lateral ventricles, appeared to be distended with blood, as the vessels of the pia mater were.

CAUSES OF PHRENITIS.

PREDISPONENT CAUSE. As persons who are liable to general inflammatory complaints, those of a passionate disposition, and those addicted to deep study, are observed to be principally subject

to phrenzy ; it is evident that the predisponent cause is some morbid state of the vessels within the cranium.

EXCITING CAUSES. Every circumstance which tends to increase the action of the vessels within the head has been regarded as an exciting cause of phrenitis *. Such are, intoxication from the immoderate use of fermented liquors ; blows on the cranium ; and the exposure of the head for a considerable time to the influence of the solar rays. The operation of these causes needs no explanation. The process of parturition, when difficult, acts in the same way. The suppression of habitual evacuations is also an exciting cause.

In inflammatory affections of the parts within the thorax, the blood being prevented from passing readily through the lungs, cannot be returned as usual from the veins of the head ; while, at the same time, the action of the arterial system is increased † : hence the cause of the frequent termination of peripneumony in phrenitis is obvious.

REMARKS ON THE CASES OF PHRENITIS.

THE first case illustrates the explanation offered respecting the cause of the termination of inflammatory

* Vide Dr. Cullen's First Lines, par. 294.

† Vide Van Swieten Comment. in Aphorism. Boerhaavi, No. CCLXXII.

matory complaints of the thorax in phrenitis; for the blood seemed accumulated in the jugulars, as well as in the veins within the cranium. It is to be observed that, in this case, if the relation of MORGAGNI can be credited, (and his general accuracy and fidelity cannot be doubted), both the arteries and veins within the head were distended with blood.

In the second and third cases, the serous fluid on the surface of the brain had proceeded from the inflammation of the pia mater.

SECT. II. *CYNANCHE TONSILLARIS*; OR, COMMON INFLAMMATORY SORE THROAT.

THIS disease* consists of inflammation of the tonsils, the uvula, velum pendulum palati, and mucous membrane lining the fauces, attended with inflammatory fever.

The symptoms are different according to the degree and extent of the inflammation; and, therefore, that an accurate description may be given, it is necessary to notice three varieties.

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* Vid. Dr. Cullen's First Lines, par. 301, et seq. Home Princip. Med. p. 121. Quarin de curandis Febris et Inflam. Comment. p. 223.

1st, In ordinary cases one of the tonsils is first affected; so that deglutition, although painful, is not difficult. By degrees the inflammation extends to the other tonsil, to the uvula, to the velum pendulum palati, and along the membrane of the fauces; and is even communicated to one or both Eustachian tubes. The febrile symptoms are then aggravated. Deglutition is very painful and difficult. Soft solids being more easily swallowed than liquids, the saliva is allowed to accumulate in the fauces, and excites a constant hawking, attended with a degree of nausea. Pain is felt in the internal ear or ears; sometimes deafness is occasioned. The voice is hoarse; and respiration is somewhat difficult. After some days these symptoms subside; and the inflammation terminates either by resolution or suppuration. In the former case, salivation in various degrees takes place; and sometimes small sloughy spots of a white or yellow colour, and circumscribed form, appear on the tonsils, or even over all the fauces. These often continue for weeks after all the symptoms of the disease have disappeared. In the latter, slight shiverings are felt; the swallowing becomes less difficult, and one or both tonsils when examined, appear no longer of a florid red colour, and excessively distended as they formerly were; but are soft, and white, or yellowish, from containing pus. Previous, however, to this change,

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the pain is sometimes in irritable habits so great as to induce convulsions. The abscess at last bursts; and its contents are either discharged into the œsophagus, which is known by a bitter taste being felt, or are hawked up mixed with a little blood and mucus. In some cases, instead of a single abscess there is a succession of small abscesses. Soon after this, the patient regains his former good health. But sometimes the tonsils remain indurated, and as it were scirrhus, and prove exceedingly troublesome. In some cases, too, the uvula is for many months relaxed, and the tonsils are affected with a spongy indolent swelling.

2dly, In the second variety, the inflammatory symptoms both general and local, occur in a much more violent degree. The disease is ushered in with shivering; then roughness of the throat is felt, soon succeeded by swelling and inflammation of the tonsils, uvula, velum pendulum palati, and whole mucous membrane of the fauces, so that the passage to the nose from the throat is closed up. The root of the tongue, too, is swelled and inflamed; and also the muscle that moves the os hyoides. The febrile symptoms at the same time are violent; the pulse being often one hundred and forty. Both deglutition and respiration are impeded. The countenance of the patient is swelled,

swelled, and red; his eyes are somewhat inflamed and prominent; and although he moves the jaw with great difficulty, he is forced to keep his mouth as open as possible in order to breathe. He complains of pain in the ears and head. Sometimes, at this period of the disease, epistaxis takes place, followed by mitigation of the symptoms. In other cases, the same event succeeds a swelling and redness of the sides of the neck. But most generally smart rigors supervene, and a large abscess is formed in one or both tonsils. In some rare cases, the matter being discharged into the larynx occasions sudden suffocation; but it is commonly evacuated into the œsophagus, after which the inflammatory symptoms gradually subside.

3dly, Instead of the inflammation being confined to the fauces, as in the two former species, it is sometimes extended downwards amongst the muscles of the larynx, and even along the membrane investing that canal. Where the muscles alone are affected, there is a constant sense of suffocation from the difficulty of opening the glottis; at the same time, the voice is sharp and shrill; and great pain is felt in the act of swallowing. When the membrane investing the larynx is inflamed, there is excessive difficulty in breathing and speaking, and the voice is stridulous. In this species of the disease, the symptoms proceed with
such

such rapidity, that the patient is within three or four days either relieved by the inflammation terminating in resolution in some places, and in suppuration in others; or is carried off by suffocation from the discharge of matter into the trachea, or from the chink of the glottis being completely closed up.

In the second and third varieties, phrenitis, or pneumonia, have been known to supervene. The disease very seldom terminates in gangrene.

The symptoms of inflammatory fever distinguish in general all the varieties of cynanche tonsillaris from every other species of sore throat. In some rare cases, however, this criterion is not sufficient to discriminate it at the beginning from the angina maligna. On such occasions, the appearance of efflorescence on the surface of the body, the previous history of the patient, and above all the nature of the prevailing epidemic, afford unequivocal marks of the difference of the two species.

The inflammation in the first variety is of a mixed nature; being seated in glandular bodies, and in a membrane which, while it partakes of the structure of mucous membranes, and of the cuticle, differs from both in possessing part of that mechanism through which the sense of taste is conveyed. The tonsils and uvula have therefore the phlegmonic species of inflammation; while the membrane of the fauces is affected probably with

with the erysipelatous, altered somewhat in its phenomena by the peculiarity of structure of that membrane. The sloughs ought perhaps to be considered either as suppurations of the mucous follicles, or of those glandular bodies which serve to transmit the sense of taste.

In the second variety, the inflammation seems to differ from the former only in degree and extent. It is indeed communicated to the root of the tongue, and the muscles of the os hyoides; but this only aggravates the symptoms.

The inflammation of the third variety, however, is more complicated: for in it, as in the former cases, not only are the glandular parts, the membrane of the fauces, and the muscles of the os hyoides, affected; but also the membrane lining the larynx, (which is a mucous one) and perhaps the substances which connect the cartilages of that organ.

CASE OF CYNANCHE TONSILLARIS.

(XLIV. 3.)

A CARPENTER, aged thirty-three years, of a tall stature, pretty corpulent, and of a large size, having, as far as could be learned, been in good health, returned home one evening during the cold sea-

son very much intoxicated, and greatly heated, both by the wine he had drank and by the fire at which he had sat. Having become very feverish, and being affected with sore throat, a physician was sent for the same evening, and he was bled in the arm. As the disease nevertheless did not abate, he was in the morning brought into the hospital at Padua, where venesection was repeated; but with so little effect, that in the evening it was again had recourse to, a quantity of blood being drawn from his foot. On the morning of the following day, the remedies, both external and internal, which had been already used, and which were still employed, having failed to produce any good effect, blood was again drawn from his arm, and at noon from the sublingual veins. The jugular could not be opened agreeably to the wish of the physicians, as the patient could not bear the posture necessary for that operation. Notwithstanding of all these means, the symptoms of fever and restlessness were not only not moderated, but were even increased; and at the same time they were attended with difficulty of swallowing, speaking, and breathing. On the following day, (which was the third of the disorder) he mentioned that he was affected with virulent gonorrhœa, and that he had been troubled with it for at least a fortnight. A vein in his foot was again opened on that day. The blood which had

hitherto been drawn had never had any crust on its surface, but was somewhat hard, and contained a small proportion of serum. His neck was a little swelled, but not his face, which was not even red. Within two hours after the last venesection, although the pulse still continued strong, the patient himself was sensible of his approaching dissolution, which actually took place about noon of the same day; though it happened in such a manner, that it appeared to the attendants to have been occasioned by accident: for having called for the gargle which he used, and having perhaps put, unguardedly, some more of it into his mouth than he intended, he instantly expired, as if he had been suffocated by the fluid.

Appearances on Dissection.

ABDOMEN. Nothing uncommon appeared within the abdominal cavity; except a globular body, placed near the edge of the mesentery, which resembled very much, in form, in colour, and in size, one of the largest eggs that project from the ovarium of a boiled hen. This was nothing else than fat, of a more yellow colour than the rest of the fat of the body: it was included within a single membrane, in the form of a spherical bladder, having no intervening membranous lamellæ as far as could be observed. The state of the urethra was examined, in consequence of the patient's having confessed himself affected with gonorrhœa.

norrhœa. The prostate gland would have appeared larger than ordinary, had not the penis also been of a large size, as it generally is in a large body. The prostate, the caruncle, the vesiculæ feminales, and every other part within the urethra, except the internal surface of that canal, which seemed to be somewhat more moist and more red than usual, were in a natural state. One of Couper's glands was wanting, a circumstance not very uncommon: the substance of the other was changed into a hard, firm, ligamentous-like body.

THORAX. The lungs were neither turgid nor inflamed, but were perfectly sound. The membranes, however, which invest these organs, like other membranes in this body, resisted the knife more than usual. The left lobe of the lungs was closely connected to the pleura, but the right was perfectly free. The pericardium contained a little red coloured fluid. This was not tinged in consequence of dissection; for, as it was congealed by the cold, it plainly appeared to be internally of a red colour. Within the heart, which was uncommonly large, being out of proportion to the body, (and it too was large) neither polypi nor any thing unusual were found. A small quantity of black blood only, which was neither too fluid nor too much coagulated, was seen within it. The aorta, from the valves at its origin quite to the celiac artery, exhibited many marks of disease; for

here and there a few spots, which were not of a bony hardness, were perceived on its internal surface. Internally, too, except in the seat of these spots, its surface was no where whitish, but of a red brown colour: neither was it smooth and shining, as it generally is, but unequal, from small and thin excrescences, of a red brown colour, both externally and internally, and of various forms and sizes. The largest of these might have been covered with a lupin, the form of which it much resembled. When looked at, they appeared to be of a soft consistence; but when cut into, they were found to be as compact and firm as the parietes of the vessel. This diseased state was much more considerable in proportion as the artery approached the heart. But it did not extend, neither to the carotids, nor to the subclavians, nor even below the celiacs; under which too the appearance of white spots became gradually less and less. The parietes of the artery were also harder than usual. The fourth sinus of Vallalva was obviously larger than natural, though not in a very great degree. The septum of the auricles of the heart had its surface next the pulmonary vein marked with parallel furrows, which were not very slight.

HEAD AND NECK. The vessels of the brain, both externally and internally, and not only within the ventricles, but also in different places within

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in the medullary substance, were distended with blood. Those vessels which crept through the left side of the pia mater were more particularly distended. That membrane, like the other membranes of this body, when cut into, gave more than usual resistance. The lateral ventricles contained a small quantity of bloody-like fluid. The tongue was thicker than usual; the vessels upon its superior surface, from the basis towards its apex, were certainly enlarged in their diameters from the included blood. The uvula and the velum pendulum palati were sound. The membrane investing the tonsils was considerably thickened, as it contained a quantity of yellow coloured serum which resembled yellow jelly. The tonsils themselves were swelled, and more especially the left one, which was harder than the other, and from which, when pressed upon or cut into, some pus was expelled. The cartilages and muscles proper to the larynx were perfectly sound; but the membrane investing that canal was diseased both externally and internally. Internally it was a little redder than usual, as was also the contiguous part of the aspera arteria. It was somewhat swelled too, but so slightly that the chink of the glottis did not appear to be thereby straitened. The same membrane, where it covered the epiglottis, both on the concave, convex, and lateral surfaces of that organ, was swelled, and in some parts was of a florid

rid red colour, in others of a brown red. These appearances were less conspicuous on the concave surface than elsewhere, and on it were confined to the third part of its extent. When cut into, they were found to proceed from a collection of blood and serum which distended the membrane and the contiguous glandular bodies only. On the convex surface, these fluids seemed to have begun in part to be converted into pus. Besides, the same membrane externally, where it covered the larynx on the back part, together with the glandular bodies enveloped by it, were affected with considerable inflammation, especially towards the sides. On each side, the membrane projected in form of a protuberance nearly of the thickness of one's little finger. These protuberances proceeding from the neighbourhood of the basis of the cricoid cartilage, and converging in their ascent, reached somewhat above the arytenoid cartilages. They were totally unconnected with those cartilages, and with the superior part of the larynx, although they adhered to the remaining and inferior part of that canal. These bodies were like two inflamed condylomata, resembling in form and colour the appearance of the epiglottis already described, except that they were of a deeper florid red colour, and had less of the brown taint. When dissected, they were found to consist of the membrane and its glands distended with effused blood and serum.

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The swelling was most considerable on the left side, which it has been remarked was the side principally affected.

CAUSES OF CYNANCHE TONSILLARIS.

PREDISPONENT CAUSE. Besides the predisposition to general inflammatory complaints, it appears that some local affection of the parts predisposes to inflammation of the throat; for it is observed that some persons are wonderfully liable to it. Men it has been alledged are more subject to this complaint than women. After the throat has been once inflamed, there exists always a great predisposition to a return of the inflammation.

EXCITING CAUSES. The exciting causes commonly enumerated are, violent exercise of the organs of the voice, and the sudden or long continued application of cold to the throat, or to some other part of the body. Hence the disease occurs most frequently during vicissitudes from heat to cold in the state of the weather, at which time it is often epidemic. Common inflammatory sore throat is never communicated by contagion.

REMARKS

REMARKS ON THE CASE OF CYNANCHE TONSILLARIS.

THE preceding case is a well marked example of the third variety of cynanche tonsillaris.

The seat of the disease is so accurately pointed out by the description of the appearances on dissection, that any additional observations are unnecessary.

Considering the state of the vessels within the cranium, it is a very remarkable circumstance that delirium did not take place previous to death.

SECT. III. *PNEUMONIA*; OR, INFLAMMATION OF THE PLEURA AND LUNGS.

INFLAMMATION of the pleura and lungs* is indicated, if along with inflammatory fever there be pain in some part of the thorax attended with cough, and difficulty of breathing. The disease is termed, Pneumonia, or Pleurisy, Peripneumony, Pneumonic Inflammation, &c.

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* A most accurate description of this disease is contained in Dr. Cullen's First Lines, p. 334. et seq.

This disease is commonly ushered in by shivering, succeeded by the usual symptoms of inflammatory fever; a few hours after which pain in some part of the thorax, cough, and difficulty of breathing supervene. The patient, at the same time, has his face swelled and livid, and is exceedingly restless and anxious. If he have any short slumbers, they are interrupted by frightful dreams. The pulse is generally frequent, full, strong, and hard.

The pain is commonly severe and pungent. It is seated most often in one part, viz. about the middle of the sixth or seventh rib on either side. It most frequently continues fixed.

The cough is more or less violent. It constantly aggravates the pain. At the beginning it is sometimes dry, but most generally it is attended with the expectoration of pellucid or frothy mucus.

The breathing is most difficult and painful in the act of inspiration. It is rendered more uneasy by posture, particularly when lying on the pained side.

Such are the general symptoms of the disease, but a considerable variety in this respect is observed. Thus, in some cases, it steals on without being preceded by well marked signs of inflammatory fever; there having been no rigors nor excessive heat, and the pulse being soft, and

small, instead of hard and full. The pain, too, is sometimes dull instead of pungent, or the sensation of oppressive weight rather than of pain is felt.

Much variety in the state of the symptoms is also observed, even in cases where the disease is clearly indicated at the beginning. Sometimes, for example, the pulse is full and soft; at other times small and oppressed; the pain extends from its original seat to other parts, as from the side to the scapula, or from the sternum to the clavicle; and the breathing is most easy when lying on the pained side, or on the back.

After these symptoms have continued in a greater or less degree for some days, they are either mitigated or become rapidly much aggravated, or continue stationary for a great many days.

In the first case, hæmorrhagy from the nose, or from the seat of piles takes place; or a profuse sweat breaks out over the whole body, or there is a copious expectoration of thick yellow matter tinged with blood, or a very great discharge of loaded urine, or, it has been said, a large evacuation of bilious matter by stool. Sometimes two or more of these critical discharges concur, as sweat and expectoration, or the hæmorrhagy and loaded urine. That fluid has in some cases a white or purulent appearance. Sometimes, too, the symptoms

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toms are mitigated by an erysipelatous eruption in an external part of the body.

In the second case, no expectoration appears, or it is suddenly checked, or only frothy mucus is coughed up. The difficulty of breathing, pain in the thorax, restlessness, and anxiety, continue to encrease. The features sink, the pulse becomes very quick, small, and even intermitting. Delirium succeeded by coma, and subfultus tendinum supervenes. Partial sweats break forth, followed by coldness of the extremities; and death, or sudden suffocation, happens. Sometimes too all these symptoms are preceded by a temporary remission, which imposes on the patient and attendants.

In the third case, there is only a partial mitigation of the symptoms, (or rather there is no increase in their violence) until about the fourteenth day, when the pain ceases; but the difficulty of breathing and quickness of the pulse continue. Slight shiverings, succeeded by heat, soon after occur; and then the cough is found to be aggravated on the least motion, and the patient cannot lie on that side which was formerly free from pain. Great debility and emaciation of the body ensue, which terminate in hectic fever and phthisis pulmonalis; or, after a great quantity of matter has been discharged from the lungs, the patient gradually recovers good health; or, what often happens, he is suddenly suffocated. There

is also in this case another variety: for after the fourteenth day, along with difficulty of breathing, increased by the slightest motion and cough, the patient is unable to lie on either side; he feels a weighty sensation above the diaphragm, and the noise of fluid within the chest may be heard, or fluctuation even may be felt. Such cases generally end in suffocation.

PNEUMONIC inflammation occurs most commonly during vicissitudes of the weather from heat to cold, and consequently is most prevalent during spring and autumn.

It attacks chiefly those in whom the inflammatory diathesis is strongly marked. No period of life after puberty is exempt from it; but it most generally occurs between the twentieth and the fortieth year.

The seat of this disease is commonly first in the pleura, and from that communicated to the substance of the lungs. Most authors before Dr. Cullen imagined that sometimes the inflammation was confined to the pleura lining the ribs, and sometimes it began in the parenchymatous structure of the lungs, from whence it was extended to the pleura investing those organs. The former of these cases was styled Pleuritis, and was said to be distinguished from the latter (which was called Peripneumony) by the pulse being very hard and tense, and the pain acute and pungent. But as
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this distinction did not seem to Dr. Cullen to be confirmed by the appearances on dissection, nor to be useful for practical purposes, he wished it to be laid aside. If the reasons urged by him in support of his objection to the old division required any additional weight, the following histories would amply afford it: for there is not a single case, amidst the great number detailed, which can properly be called pleuritis; the lungs having been affected in every instance.

When pneumonic inflammation terminates in the first way described, the phenomena clearly shew that resolution had taken place, or that the effused fluid had been evacuated.

The appearances on dissection, where it ends in the second manner, prove that either such a quantity of lymph and serum, and sometimes even blood, had been effused, as had choaked up the air cells of the lungs; or that the whole substance of the lungs had undergone such a change as to be indurated, and to have the cells much straitened, which is occasioned by a great number of minute vessels throughout the cellular structure being much distended with blood.

The third termination depends upon suppuration within the substance of the lungs, or an exudation into the cavity of the chest from the surface of the pleura having taken place. In the former case, the matter is sometimes deep-seated, and
sometimes

sometimes superficial. It is sometimes coughed up, at other times it is absorbed into the system; but most frequently it bursts suddenly into the air cells, and suffocates the patient. This constitutes what is termed *Vomica*. In the latter case, which is named *Empyema*, the effused fluid is in some rare instances re-absorbed; but most generally it is in such quantity as to oppress the lungs, by which the respiration is more and more impeded, till at last suffocation ensues.

From these observations it is evident that inflammation of the pleura, like that of other organs composed of cellular structure and diaphanous membranes, terminates in resolution, suppuration, or exudation, singly or combined. But it is to be remarked, that it has also a different termination from the inflammation of other parts: for the effusion which often precedes resolution as well as suppuration sometimes proves fatal.

In some rare cases, there is an effusion of pure blood into the thorax, and in others the inflammation ends in gangrene*.

CASES

* The author of these remarks did not think it necessary to give a more minute detail of pneumonic inflammation, and of the appearances on dissection, as both are so very fully explained in the histories of the following cases.

CASES OF PNEUMONIC INFLAMMATION.

CASE I. (XX. 16.)

AN unmarried woman, aged twenty years, was affected with pain, first in the left, and afterwards in the right side of the thorax, along with cough. She could not lie upon the right side. During the night she became delirious, and was affected with convulsions in such a manner that some of her limbs remained contracted. In this situation she died.

Appearances on Dissection.

ABDOMEN. The colon, very much distended with air, after having reached the stomach, proceeded in a straight line to below the middle of the belly; from whence it was immediately reflected towards the superior part of that cavity, and then followed its natural course. The appendicula vermiformis, of the thickness of a goose quill, and eight inches in length, lay in an oblique direction towards the right kidney. All the other viscera were in a natural state.

THORAX. The right lobe of the lungs was somewhat inflamed, especially at the posterior part. The left lobe, which everywhere adhered to the pleura lining the ribs and diaphragm, in such a manner

manner that it could not be separated without laceration, was very red. The heart contained no polypous concretion; but in each ventricle black clotted blood was found. It was also thick and black in the vessels, but nevertheless it was in a fluid state.

HEAD. The brain was very sound, though it contained about its basis a small quantity of serous fluid.

CASE II. (XX. 22.)

AN old man, of about sixty years of age, was affected with pain in the right side of the thorax. He was also feverish; and had a cough, attended with expectoration. He lay with most ease upon his back. The expectoration had become more copious; but on the tenth day, after venesection had been performed, it was suppressed. On the eleventh day he died.

Appearances on Dissection.

THORAX. The left lobe of the lungs, although it adhered everywhere to the pleura, was sound. The right lobe, on the contrary, although unconnected with the pleura, was on its posterior part so much inflamed as to resemble in its substance solid flesh. Two polypous concretions, nearly similar to each other, one in each ventricle, were found in the heart.

C A S E III. (XX. 24.)

A MAN, of about forty years of age, who had long laboured under two herniæ, became affected with a pain in the thorax, and difficult respiration. At the beginning of the disease he lay most easily on the right side, and after that on the left; but he could by no means lie upon the back. He expectorated much matter. He was obliged to hold his neck erect, in order to breathe. On the tenth day he died.

Appearances on Dissection.

ABDOMEN. The cavity of the tunica vaginalis testis was filled with serous fluid; and from that coat itself some drops of serum could be pressed out. This constituted, on one side, a hydrocele. Upon the other side there was a varicose production of the veins of the scrotum, which represented pretty exactly the figure of a chain. Thus what appeared to be herniæ, were in fact a hydrocele and circocele.

THORAX. Both lobes of the lungs adhered to the pleura; in such a manner, however, that they could be separated without laceration. At the parts next the back they were inflamed, and much indurated. The pericardium contained no fluid. In the heart three polypous concretions were observed. One of these was in the left ventricle:

the remaining two were thicker, and of a firmer substance; and were placed, one in the right ventricle, and the other in the corresponding auricle.

CASE IV. (XX. 26.)

A MAN, aged fifty years, who had from his birth been of a brownish complexion and atrabilious temperament, and who had been much addicted to venery, became affected with difficult respiration, like what is occasioned by catarrh. His disease having gradually increased in violence, he was in about a month compelled to confine himself to bed. His voice was shrill and loud. He had a copious expectoration of watery matter. His respiration was exceedingly difficult, attended with a sense of strangulation in the throat; and he lay with great difficulty on either side, but with most difficulty on the left, his breathing being then more uneasy. His respiration at last became panting; nor could he breathe unless his neck was erect. In the progress of the disease the copious watery expectoration was changed into a small quantity of thick, viscid, stinking matter, and his respiration grew easier; but the sense of suffocation still remained. The fever was always slight. At length he died.

Appearances

Appearances on Dissection.

ABDOMEN. The spleen was found everywhere connected to the neighbouring parts by intervening membranes: its arteries were in a cartilaginous state. In the right side of the scrotum a hydrocele was observed. This was occasioned by a quantity of watery fluid which was collected between the tunica albuginea and the testis. When that membrane was compressed, especially at the side of the large blood-vessels, some limpid drops of fluid flowed out. When this fluid was exposed to a strong heat, it became coagulated into a very white substance: when placed over a gentle fire, it was gradually evaporated, and left behind it marks of lymph.

THORAX. The right lobe of the lungs differed little from its natural state. The left adhered at every point to the pleura: its substance was indurated and inflamed. In each ventricle of the heart a polypous concretion was seen; and, contrary to the observation of Valsalva, that in the left ventricle was the largest. It was not allowed to examine the fauces, where perhaps the principal disease lay.

CASE V. (XX. 55.)

A MAN, aged forty years, of a lean habit of body, who had begun nearly two years before to

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complain

complain of a pain, more or less violent at different times, about his stomach, together with hardness at that part, sometimes attended with a simple diarrhoea; and who had lately been affected with a slow continued fever, which lasted for six or seven months, and reduced him much, was seized with an acute pricking pain in the left part of the thorax. He lay with great difficulty on that side, though he could easily lie on the other. He had cough, and at the beginning a little expectoration. The expectoration having ceased, he died on the tenth day after the first attack of the pain in the thorax.

Appearances on Dissection.

THORAX. The superior portion of the left lobe of the lungs had entirely degenerated into a hard tumor, compressing on all sides the neighbouring parts, and connected with the pleura in some places by small filaments. The pleura itself was inflamed. The right lobe, although it adhered so strongly to the pleura that it could scarcely be separated without laceration, was perfectly sound. A moderate quantity of watery fluid was found within the pericardium. The ventricles of the heart contained polypous concretions. That in the left, which was very small, extended into the aorta; that in the right, which was larger, was continued into the pulmonary artery.

C A S E VI. (XXI. 4.)

AN old man, seventy four years of age, of a low stature of body, who used to go about victualling houses; after having been for several years subject to inflammation of the lungs, at last died in the hospital of Padua, on the eighth day, of a disease of that kind. The particular symptoms of the case could not be accurately learned; but there was no doubt that no mark of diseased heart, such as deliquia, palpitations, or irregularities of the pulse, had been observed.

Appearances on Dissection.

THORAX. The lungs were universally connected with the pleura. The upper part of the right lobe was indurated, and of a blackish colour. The sanguiferous vessels of the same lobe were very closely connected with the bronchia; and one of these vessels was much dilated to the extent of some fingers breadth, after which it became of its ordinary size. The trunk of the bronchial artery, where it arises from the aorta, was nearly three times larger than usual. A tubercle, of the size and form of an ordinary cherry, appeared on the posterior part of the left ventricle of the heart, at the distance of two fingers breadth from the apex. One half of this tubercle projected above the surface, and the other half was buried within the substance

substance of the heart. It resembled one of those hydatids which are seen in other organs, as the lungs or kidneys, and are so placed as to jut outwards. When punctured with the knife, it discharged a little watery fluid, but a more turbid fluid remained. When the tubercle was fully opened, this was forced out along with a small membrane, in which there were some white mucous substances, together with a particle of a tendinous hardness. This small membrane seemed to serve as the inner coat of the tubercle; for, externally another coat, which was thick and white, and rough and unequal on the inside, surrounded it entirely. This coat was quite sound, as were also the parts adjoining to the tubercle. The left auricle of the heart was much longer than usual. On the internal surface of the aorta, especially at its arch, and near the heart, numerous bony valves were observed; but, behind the semilunar valves the beginnings only of such scales appeared. Some more of these scales were seen in other parts of that vessel, even as far as the origin of the cœliac.

CASE VII. (LXX. 10.)

AN old woman having been affected with inflammation of the lungs, together with diarrhœa, died.

Appearances on Dissection.

ABDOMEN. Each ovarium, and more especially

ly the right one, was of a white colour, and very much enlarged; and appeared of a knotty texture, from tubercles or hydatids, some of which were larger than the others, and were filled with watery fluid, which spouted out from them when they were cut into. The Fallopian tubes were totally unconnected with the ovaria, and were in a natural state. The internal surface of the fundus uteri was of a red colour, inclining to black, in consequence of blood which lay under it in several places. When the uterus was externally pressed upon, in order to force out that blood, the internal surface was found to be so flaccid that it was torn. When the posterior crural nerve was separated into two portions, in a longitudinal direction, which was done by the finger alone, a vessel of the diameter of the twelfth part of an inch, filled with blood, appeared amongst its fibres, almost in a direction parallel to them, situated near the axis of the nerve. The internal coat of the urethra was quite black, from its vessels (which lay longitudinally on it, and parallel to each other) being much distended. This blackness became greater towards the meatus; that part was flabby, and allowed a relaxed portion of the internal membrane to be prolapsed without it on the right side. The bladder was in a sound state: the two protuberating bodies which proceed from
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the ureters, appeared meeting nearly at an angle, at the distance of a finger's breadth from the orifice of the bladder. No mark of the roundish body, called uvula, could be distinguished, neither about the orifice of the bladder, nor in the space between it and the insertion of the ureters, nor in the contiguous part of the urethra.

THORAX. The inferior lobe of the lungs, on the right side, which was very large and heavy, adhered strongly to the pleura. When cut into, its substance was found to resemble that of a boiled liver. The heart was very large in proportion to the stature of the woman, which was of a moderate size. This was not owing to the thinness or extension of its parietes, for they were of the ordinary thickness, or rather were thicker than usual. The columnæ, as well as the fasciculi of the ventricles, and the fasciculi of the auricles, were uncommonly thick. The orifices of the coronary arteries exceeded the sixth part of an inch in diameter; and the artery which lay next them on one side, called *arteria adiposa*, had also an orifice which was not very small. Within the left auricle, besides several moderate sized mouths of vessels, one as large as that of the coronary arteries just stated, appeared open. On cutting into the vessel to which it belonged, it was observed that two or three small veins returning the blood from the parietes of the auricle, ran into it.

The ventricles were full of polypous concretions. The aorta on the right side, where it begins to descend, had its internal surface unequal, as it projected inwardly, and contained between its coats a substance of a bony hardness, which might have been covered by the nail of one's thumb. Below the two upper pair of the inferior intercostal arteries, instead of the three successive pairs which should have appeared, a single vessel was at each of the places sent off from the middle of the aorta. These were neither of a larger size than usual, nor were they immediately divided into two branches, which commonly is the case, when one vessel is sent off instead of a pair; for each extended as a single trunk for the space of a finger's breadth at least. The diaphragm had instead of one foramen, for allowing the transmission of the vena cava, two foramina divided from each other by a thin partition.

CASE VIII. (XXI. 35.)

A MAN, of a middle age, and healthy habit of body, rather lean than fat, by trade a stone-cutter, having been affected first with fever, and immediately after with acute pricking pain in the left side, and such a loose state of the bowels that he had within twenty-four hours eight fluid stools, which were not of a yellowish colour, nor discharg-

ed with any uneasiness, succeeded by an oppressive pain in the thorax, was on the fifth day of the disease brought into the hospital of Bologna, having had no assistance while in his own house. He was bled; and the blood drawn was exceedingly thick, but exhibited no buffy crust. Along with the symptoms already enumerated, which continued to the last, he expectorated some matter tinged with blood, but the expectoration was not of long duration. At length, on the eleventh day, he grew confused in his mind, and somewhat delirious, and his pulse, which before had been tense and not intermitting, having become imperceptible, he died.

Appearances on Dissection.

ABDOMEN. The colon, being somewhat distended with air, appeared immediately on opening the belly. From the middle of that portion, which is generally extended across the belly, it turned downwards to the umbilicus; from whence it again mounted upwards, but not very high: in other respects it was in a natural state. Some parts of the small intestines appeared as if inflamed. The liver was, both externally and internally, of a pale colour. The gall-bladder was almost empty, as it contained but a very few drops of bile, that tinged paper, over which it was spread, of a dirty yellow brown colour. The spleen was larger and more flabby than usual.

THORAX.

THORAX. The chest contained no fluid. Both lobes of the lungs were on the anterior part turgid, and were there both of a natural colour and consistence; but, on the lower and posterior surface, and in the left side on the whole lateral surface, they were closely connected to the parietes of the thorax. The pleura, wherever the lungs adhered, was unequal in its surface: towards the back it was blackish, and on the left side was thickened, and was of an unnatural colour. The diaphragm, both on its muscular and tendinous parts to which the lungs had adhered, was of a reddish brown colour, and had its blood-vessels much more distinct than common. The lungs were very heavy: they were black on their whole posterior and lower surface, and the blackness penetrated their internal structure, which was compact and somewhat hardened. On the left side a considerable portion of their substance was found to be more indurated and more compact; while on the anterior part, especially on the right side, it was of a soft thin consistence, and when cut into appeared of a rose colour. The pericardium contained a little more fluid than usual. The vessels on the surface of the heart, especially on the flat surface, were turgid with blood. Both the vena cava and the right auricle were also distended with blood. The blood was exceedingly black; and contained no polypous concretions, (and none

appeared, neither in the ventricles of the heart, nor in any of the vessels) nor almost any coagulated substance of any kind.

CASE IX. (XX. 51.)

A YOUNG man above twenty years of age, who had previously been affected with chronic fever, was seized with acute fever, attended with pain of the breast, difficulty of breathing, and the expectoration of a small quantity of matter tinged with the colour of blood. During the first days of the disease he lay for the most part on his left side; and during the latter days he lay constantly on that side. About the sixteenth day he died.

Appearances on Dissection.

ABDOMEN. The spleen was three times larger than usual.

THORAX. The left lobe of the lungs was so much swelled, that it filled entirely the cavity in which it was placed. It was universally indurated and inflamed, and adhered everywhere to the pleura. That membrane being of a reddish colour, exhibited marks of incipient inflammation. The pericardium was not only filled, but also much distended, with a fluid like cow-milk whey, which had deposited some concretions on the surface of the heart. A polypous concretion, of a very small size, and very flaccid, was found in each ventricle of the heart: that in the right was the largest.

Branches

Branches of these polypi extended into the arteries, auricles, and veins: those in the veins were the larger.

C A S E X. (XXI. 19.)

A BUTCHER, aged seventy-eight years, of a tall stature and of a fallow complexion, who at other times had been troubled with the expectoration of bloody matter, had for four days felt an internal acute pricking pain a little below the left breast; when he was, on that account, admitted into the hospital of Bologna. His pulse was very irregular, intermitted often, was quick and feeble. He had frequent cough, attended with a sound nearly resembling the barking of a dog. The matter which he expectorated was thick, and contained polypous-like substances of a white colour. His respiration was difficult; and he could only lie on his back. Eight ounces of blood were drawn on the day of his admission into the hospital, namely, the fifth day of the disease. A yellow crust, two inches deep, of a very firm consistence, and marked with livid spots on its external surface which was hollow, appeared on the top of the blood. The crassamentum below the crust was melted down into a number of little lumps. It contained no more than a single spoonful of serum, which was turbid. Blood afterwards was
seen

seen on the expectorated matter. The symptoms not having been in the least alleviated, venesection was again performed on the seventh day. The crust of the blood then drawn was thin; the serum, which was of a golden colour, was in proper proportion, and the crassamentum, was of the natural consistence. On the eighth day, the expectoration having become diminished, and the other symptoms having continued, he could no longer speak, but turned himself on the right side, in which situation he died in a placid manner, without any stertor.

Appearances on Dissection.

ABDOMEN. The abdomen was raised into a flaccid and slightly livid tumour, at the right ileum; this was found to proceed from the colon being at that part much distended with air. Another tumour, of a small size, appeared in the left groin. It consisted of the inguinal gland, which measured one inch in thickness, one and a half in breadth, and two in length. When cut into, the greatest part of its substance had a natural appearance; the remainder, however, was of a whitish colour, and seemed to consist of small round particles. The scrotum was swelled on both sides, but especially on the left; and in the lower part of the right side was of a red colour. It contained three swellings. The first of these appeared on the left side, at the superior part of the testicle, and consisted of a sacculus, extending from the cavity of
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the abdomen, and containing nothing but a long fold of the omentum, which was rugous, and could be easily drawn forward. Not only the rugous appearance, but also the uncommon convolutions of the ileum more especially, and of the colon too in some respects, observed in the belly, clearly proved that this sacculus had been at other times distended with a prolapsed intestine. What constituted the other two swellings, was a collection of yellow watery fluid within the tunica vaginalis testis on each side. That coat was thickened. This fluid was supposed to have been effused from a ruptured hydatid; and a small thick vesicle, already almost solid, and of a fleshy colour, appending by a peduncle from the tunica albuginea, where it invests the body of the testicle near the large bulb of the epididymis, seemed to form the remains of that hydatid. The vesiculæ feminales, and more especially the vessels which return the blood from them, were larger than usual; but they appeared to be in an incipient varicose state, in consequence of the swellings already described, rather than to have been enlarged from the salacious disposition of the man: for the prepuce, without any mark of previous disease, was contracted before the glans, just as it is in young men who have never had any connection with women.

THORAX. The right lobe of the lungs was every where connected strongly to the pleura, from which

which however it could be easily separated without laceration, except at its superior part. At that part it was blended with the pleura, and within its substance which was of a livid black colour, it contained a number of small round cells, each surrounded with its own proper covering, internally smooth, and almost empty, and having no outlet as far as could be observed. These appeared to be the marks of an old disease. When this part of the lungs was cut into, a smell resembling that of sour whey, or of the breath of children affected with worms, was perceived. The upper part of the left lobe was not diseased, except that it contained too great a proportion of ferous fluid. But its lower portion was heavy, red, and indurated like the substance of the liver. It adhered here and there to the pleura, and in different places was covered with broad white substances like mucous membranes. The surface of the diaphragm next the lobe was covered with a similar membrane, only that it was red, and lay under a little turbid serum. Both these membranes were readily separated without injuring the surface of the lungs or diaphragm. The pleura investing the parietes of the thorax and the diaphragm, also, was not only of the hardness of cartilage or bone, but even consisted here and there of thin bony laminæ. From its internal surface, and especially at the parts occupied by the bony

I laminæ,

laminæ, numerous osseous, tubercular bodies, of a hemispherical form, and of the size of a vetch, projected. All these appearances were more strongly marked on the right, than on the left side. In no part was the pleura red or inflamed. Within the pericardium a moderate quantity of reddish coloured watery fluid was observed. The right ventricle of the heart contained a large smooth polypous concretion of a fleshy colour, extending into the neighbouring auricle; and also one of a round form and thicker consistence, which went into the pulmonary artery. A similar polypus was seen stretching into the aorta from the left ventricle; and a very small one, not unlike an incrustation, lay in the left auricle. In both ventricles of the heart, and in the aorta, there was also some black half-coagulated blood.

CASE XI. (XXI. 2.)

A WOMAN affected with peripneumony, attended with irregularity of the pulse, died in the hospital of Bologna.

Appearances on Dissection.

ABDOMEN. In the gall-bladder, there were two black calculi, of a pretty hard consistence, approaching to the form of a cube, and of an unequal size, but neither of them were small.

THORAX. The substance of the lungs was as

compact as that of the liver. The pericardium contained a large quantity of fluid. The greatest part of the external surface of the heart appeared at first sight to be corroded; but that was not the case; for irregular concretions adhering to it formed that appearance. These were readily removed; and then the surface of the heart was found quite smooth and sound. To the internal surface of the pericardium, other concretions of the same nature, but totally unconnected with the former, adhered. It was therefore probable, that all these concretions were formed from the fluid contained in the pericardium. Large white polypous concretions, which were not of a very firm consistence, were found in the ventricles of the heart and in the right auricle,

C A S E XII. (xx. 3.)

A MAN, aged forty years, who had, on account of a slight wound in his leg, been for a considerable time in the hospital at Bologna, where he had lain in the same bed with a man who was carried off by the discharge from a large abscess in his thigh, became affected with acute fever; attended with cough, the expectoration of matter first tinged with blood, and afterwards of a greenish colour, difficulty of breathing, and pain in the right side. Under these symptoms, while lying

ing on his right side (on which side he lay easily), he died about the fourteenth day from the beginning of the pneumonic affection.

Appearances on Dissection.

THORAX. The left lobe of the lungs was found and unconnected with the contiguous parts. The upper lobule and the superior part of the adjoining lobule on the right side, were towards the back, swelled, inflamed, and much indurated, and adhered closely to the pleura by membranous bands. That membrane however, exhibited no marks of inflammation. Each ventricle of the heart contained a polypous concretion of no inconsiderable size; that in the right was the largest. Although these concretions extended not only into the auricles and veins, but also into the arteries, they were not continued so far within the latter vessels as within the former.

C A S E XIII. (xxi. 33.)

A SOLDIER, of a middle age, rather of a lean habit of body, was received into the hospital of Padua, in consequence of being affected with an acute pricking pain on one side, together with fever, cough, and difficult respiration. These complaints continued for some days; and then having become almost comatose, being affected with slight delirium and tremor in his hands, and

his pulse having at last been imperceptible, he died.

Appearances on Dissection.

ABDOMEN. The omentum adhered to the beginning of the colon. When it was removed, that intestine appeared in a very unusual situation: for, after having reached the liver, which it scarcely touched, it extended immediately from thence below the umbilical region, and then was reflected upwards into the left hypochondrium. All that portion was much dilated with air. The pancreas was somewhat indurated. The spleen was considerably larger than usual, and on that account extended lower down. The liver was also large, and over the greatest part of a white colour, and did not appear quite sound when cut into, especially on the right side. The ductus communis choledochus was wider than usual.

THORAX. The lungs adhered almost everywhere, except at the anterior surface, where they were nearly of the natural colour, very closely to the pleura. The right lobe was much enlarged, was heavy, and throughout indurated, except in a small portion on the superior part, and on the anterior surface. It had a smooth and uniform surface like that of the liver, and internally it exhibited no reticulated vascular appearance, but resembled the substance of the liver when boiled. The left lobe, when cut into, appeared somewhat harder

harder than usual, and was of a blackish red colour; in other respects it was in a natural state. The pleura on the left side was colourless, or rather whitish; but, on almost the whole of the right side, it appeared of a red colour, obviously from inflammation. The chest contained no extravasated fluid. When the lungs were cut off from the aspera arteria, which in this man was remarkably wide, and furnished about its division with larger and more numerous bronchial glands than usual, a large quantity of bloody frothy watery fluid immediately flowed out from the right lobe of the lungs, and a small quantity also from the left. In the pericardium, there was a small quantity of yellow fluid very slightly tinged with red. Within both ventricles of the heart white polypous concretions, with black grumous blood everywhere adhering to them, were found. They extended for a considerable way into the large vessels. Similar concretions, resembling tape-worms, had been found in the iliacs; and smaller ones, like ascarides, appeared on the longitudinal sinus of the head.

HEAD. A considerable quantity of watery fluid was discharged when the cranium was opened. The greatest part of the vessels of the pia mater were turgid with blood. When the medullary substance of the brain was cut into, a great many drops of blood, some of them large and some of them

them small, appeared here and there. A large quantity of turbid watery fluid was found in the lateral ventricles. On the choroid plexuses, which were not pale, many vesicles, some of them of a pretty large size and filled with fluid, were seen. The fornix and medulla oblongata were flabby.

C A S E XIV. (XX. II.)

AN unmarried woman, aged fifty-five years, became affected with pain in the thorax, especially about the sternum, attended with fever. At the same time, she complained of pain in her head, had difficulty of breathing, and expectorated a large quantity of matter. Diarrhœa having supervened, all the symptoms having been much aggravated, and the difficulty of respiration having increased to such a degree that she could not breathe but in the erect posture, she died about the ninth day of the disease.

Appearances on Dissection.

ABDOMEN. The gall-bladder was much distended with bile. Both ovaria were greatly indurated.

THORAX. The left lobe of the lungs adhered so firmly to the pleura lining the ribs, that it could not be separated without laceration. The right lobe, having adhered to the mediastinum in its whole extent, and to the pleura investing the

the superior ribs, was torn, in consequence of its putridity, when an attempt was made to separate it from its connections; and at the same time discharged, from an abscess which it contained, a large quantity of sanious matter of a pale red colour. The pericardium was filled with serous fluid. In the right ventricle of the heart a large polypous concretion, which filled the adjoining auricle, and was extended beyond the orifices of the veins communicating with it, was found. No polypi were observed in the left ventricle; but a small one was seen at the mouth of the aorta, and an incipient one in the pulmonary vein. The blood, it is to be observed, in this body, had lost its fluidity.

C A S E XV. (x. 5.)

AN old man, aged sixty-five years, who had two years before been affected with palsy in the right arm, and after having been freed from that disease had been accustomed to complain frequently of a pain in his head, was brought into the hospital at Bologna on account of inflammation of the lungs. When admitted, he complained much of a pain and sensation of weight in the left side of the thorax, and he expectorated purulent matter. The expectoration having ceased for many hours,

hours, he suddenly died on the twenty-third day of the disease.

Appearances on Dissection.

THORAX. The left lobe of the lungs, which was swelled and indurated, filled up the whole cavity on that side; and contained an ulcer, in which a large quantity of sanies was collected, and that matter was diffused through the whole substance of that part of the lungs. The pleura was perfectly found. In the right side of the heart there was a large polypous concretion, which was extended near a foot and a half within the vena cava, and followed the divisions of that vessel. In the left side of the heart another polypus was seen, but it scarcely reached the orifice of the aorta.

HEAD. The quantity of half a pint of watery fluid was found within the ventricles of the brain. The glandules of the plexus choroides were turgid. No other preternatural appearance occurred.

CASE XVI. (XXI. 45.)

A MAN, who had been affected with pneumonic inflammation in a very violent degree, was rapidly carried off.

Appearances on Dissection.

THORAX. The lungs were so much swelled
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that they filled the whole cavity of the thorax. The left lobe, in which side the pain had been seated, appeared wholly inflamed, and of a black colour; and besides, towards the lower parts, was stuffed up with a whitish ichor, like that of an abscess. The pleura was everywhere inflamed, livid, and marked with bloody-like points. The intercostal muscles, and particularly the internal ones on the left side, were inflamed to such a degree that they appeared bruised. Coagula of black blood, not unlike polypous concretions, were found in the ventricles of the heart, and in the contiguous large vessels, both arteries and veins.

C A S E XVII. (xx. 9.)

A LADY, aged forty-five years, who was very fat, and seemed to have a habit abounding with serum, in the beginning of the ninth month of pregnancy, after having unguardedly exposed herself to a very cold air, was affected with universal shivering, succeeded by considerable heat, great thirst, difficulty of breathing, very troublesome cough, a most oppressive pain in the right side of the thorax extending to the scapula, and bilious vomiting. At the same time, her pulse was frequent, hard, and quick in the contraction of the artery; and she had great restlessness and tossing of the whole body, a symptom which continued

exceedingly troublesome during the succeeding days. The vomiting seemed to afford a little relief.

This patient, when in health, had always had difficulty of breathing, especially after motion. She had also been often troubled with slight cough, attended with copious expectoration; and almost every day she had been accustomed to vomit in the morning (after having passed a restless night) a thick viscid matter, after which those complaints seemed to be relieved. She had had several children, and had repeatedly miscarried.

With a view to relieve the symptoms above enumerated, a vein was opened in the right arm; and other resources of art were had recourse to. But on the succeeding day a more violent attack of the disease took place. For the pulse intermitted, though it still continued quick and hard; unless she lay with her neck erect, she could not breathe; she expectorated a serous livid-coloured fluid, and she passed by stool a bilious matter. On the third day the difficulty of breathing was still more considerable: she became affected with stertor; her expectoration was in less quantity, and was very viscid, and of a whitish and sometimes yellowish colour; she had frequent stools; and her pulse was still more irregular than it had been. Bleeding was again performed, and other remedies were employed: but in vain. For on
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the fourth day all the symptoms were much worse: The pain of the chest, which had been, as was observed, dull and heavy, had now become acute, especially when she coughed or moved herself; and besides, a pain in the lower part of the belly, which suggested the idea of labour having begun, supervened. On the following night, amidst frequent irregularities and intermissions, the pulse began to flutter, the pains ceased, the constant restlessness of the whole body abated, the expectoration was suppressed, her strength was exhausted; and thus, on the beginning of the fifth day, she died.

Appearances on Dissection.

ABDOMEN. The belly was opened immediately after death. The uterus was somewhat inflamed; and contained a female child, which was already dead. The viscera of the child, as well as the abdominal viscera of the woman, were in a natural state.

THORAX. The right lobe of the lungs appeared exceedingly inflamed and indurated, and had in its under portion an incipient abscess.

C A S E XVIII. (XXI. 27.)

A MAID-SERVANT, aged twenty four years, of a good habit of body, and plethoric, who had been every winter subject to a violent cough, having

been employed in much hard labour, became affected during the night with fever, ushered in with rigour followed by heat. Within twenty-fours, pain in one part of the breast, together with difficulty of breathing, supervened. Along with these symptoms, she had constant tickling cough, and her pulse was rather hard, and resisted the pressure of the fingers almost to the very last. In the progress of the disease the pain shifted to the opposite side of the thorax. She felt a sensation of weight within the breast, and could lie on neither side. Blood was drawn, which separated into a greenish coloured serum, and a crassamentum with a buffy coat on its surface; the part below this was very black, and of a firm consistence. Although blood-letting was performed as soon as the pain came on, and although that operation was repeated twice, not only from the arms but also from the feet, on the same day, and other means of cure commonly employed in such cases were had recourse to, she died on the seventh day.

Appearances on Dissection.

THORAX. No fluid was effused within the chest, nor did the lungs adhere anywhere to the pleura except at the left side, and there the connection was neither strong nor extensive. When the left lobe of the lungs was separated from these adhesions, for which purpose it was pressed upon, a considerable quantity of turbid serum flowed out; but
whether

whether from the lobe itself, or from the interfice between it and the pleura, within the limits of the connection, was uncertain, as neither the lungs nor the pleura exhibited the marks of any particular injury at that place; but the lobe was covered, even where there had been no adhesions, with a whitish and thickish membranous substance, such as has been often described in the preceding cases. A reddish coloured sediment, similar to what subsides from water in which fresh meat has been washed, adhered to the surface of the corresponding pleura. In one part of the surface of the lungs, where there had been no adhesion, a kind of tubercle projected, which, when cut into, discharged a whitish serum like pus. The lungs were not only heavy, but were also indurated in several places. When cut into, their substance, to a great depth, and to a considerable extent, was found of a dense compact structure like that of the liver. In other places, they were almost of a red colour, and contained a large quantity of the whitish serous fluid, seen in the tubercle. From these appearances, it was evident that death had been occasioned by the inflammation and suppuration of the lungs. In the pericardium scarcely any fluid was observed. No polypous concretions appeared in the heart. The left ventricle contained scarcely any thing, but in the right there was a small quantity of black coagulated blood.

C A S E XIX. (XXI. 29.)

A MAID servant, aged nineteen years, of a plethoric full habit, from exposure to cold during menstruation, which for three months had been more sparing than usual, was affected with acute pricking pain in the breast, attended with difficult respiration. The pain was fixed under the left breast, and was aggravated when touched, so that she could not lie upon that side. After having been bled from the arm of the affected side, she was brought into the hospital of Bologna. At that time the symptoms just enumerated continued. She lay upon her back. Her pulse was quick and small, and when pressed upon by the finger gave little resistance; it was not however irregular. A sound like that of boiling water seemed to issue from the aspera arteria. She had a constant hollow tickling cough; her tongue was parched; and her belly was moderately open. Along with these symptoms, she had at times slight delirium. Blood was drawn from the right arm. When examined, after having stood for six hours, it was found to consist of a very little clear serum of a golden colour, and of a yellow crust two inches in thickness, resembling rancid fat formed into a circle, the edges of which were in contact with the sides of the vessel. When the vessel was inclined to a side
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this crust separated into several laminæ, and the lower part of the blood formed grumous substances not unlike stewed meat. After the venesection, on the same day, a small quantity of blood, or rather a little serum slightly tinged with blood, was discharged from the uterus. All the symptoms having become aggravated, the pulse appearing deeper, as if the artery had retracted inwards, and a frothy fluid resembling water in which fresh meat had been washed having flowed out from the mouth, she died about the beginning of the seventh day of the disease.

Appearances on Dissection.

ABDOMEN. When the belly was opened, a strong smell like that proceeding from inflamed viscera, in a state approaching to gangrene was perceived. The liver was of a whitish colour. The spleen was tinged with a gangrenous blackness to a considerable extent, but very superficially. The part thus tinged was the inferior portion only, so that it did not touch the diaphragm which was perfectly sound. A very bad smell arose from the uterus, its appendages, and the contiguous parts towards the back. A small quantity of reddish coloured serum surrounded these parts, and they were all externally livid from previous inflammation, which had extended to the lowermost part of the rectum, and of the pudendum, as was evident from the redness of these parts,

parts, the most minute vessels throughout them being as distinct as if distended with red wax. The inside of the thighs appeared variegated in an ugly manner, from the woman having been accustomed to put a small stove under her cloaths during Winter, in order to keep herself warm. The ovaria were not smaller than the ordinary sized testes of a man. They were soft, and contained a great number of vesicles of different sizes, filled as usual with a fluid, and supplied with ramifications of blood-vessels, which were very numerous in these ovaria. In each of them, there were also two small cells; one of these contained a minute black body, of a perfectly spherical figure, like a dried clot of blood. But in the other, there was nothing, as it consisted only of the membrane forming it, which was drawn together, and was of a green, and whitish yellow colour. One ovarium, at least, had the appearance of a chink next its surface, or at any rate, certainly exhibited marks of former injury. Two clots of blood were found in the vagina about the os tincæ, and blood could be readily forced out from the fundus and cervix uteri. The internal surface of the fundus looked at first sight, like the mucous substance with which it had been covered. The situation of the Fallopian tubes, the appearance of the rugæ of the vagina, and, of the carunculæ myrtiformes within the hymen, were perfectly natural.

THORAX. The lungs were everywhere connected to the parietes of the thorax, and even to the septum transversum, in some places by means of membranous substances; but in most places, and especially at the back and sides, they adhered by themselves, their own membrane which was found being united to the pleura. The pleura was only somewhat thicker than usual, and easily divisible into two laminæ. The superior part of the left lobe was completely indurated, resembled the compact substance of the liver, and was of a whitish colour. The substance of all the other parts of both lobes, although entirely distended with a frothy fluid, was in a natural state. That fluid flowed out when those parts were cut into; and at the same time, a purulent-like matter was discharged from many of the branches of the bronchia; and from one of these, a white substance not in the least fluid, resembling a polypous concretion, although perhaps it might have been a sanguiferous vessel, was squeezed out. In the trunk of the aspera arteria, and in the larger divisions of that canal, a whitish cineritious matter, formed here and there into concretions, was collected. The tongue was covered with the same kind of matter; a whitish and somewhat thick fluid was pressed out from the glands lying on the posterior part of the branches of the trachea; and all the bronchial glands did not seem sound. Between

the lobes of the lungs, in some places, those membranous-like substances, so often mentioned in the preceding cases, appeared. They were in this subject somewhat thick and hard; but were not, however, true membranes. In the pericardium there was a quantity of reddish-coloured watery fluid. The ventricles of the heart contained no blood; but some polypous concretions, solid for the most part, and consisting of fleshy membranes, as it were, and also in some degree of mucus. Of those which were in the right ventricle, one extended into the adjoining auricle and into the vena cava, and the other, which was round, went into the pulmonary artery and its branches. One only (also round) passed through the left ventricle; from whence it stretched on one side into the aorta, and on the other into the left auricle and pulmonary vein. The cellular membranes, which surround the trunks of the large vessels as they go out of the pericardium, seemed to be of a mucous consistence, in consequence of watery fluid being collected within them.

HEAD. The fauces and the neighbouring parts had begun to smell, as if from inflammation. When the cranium was opened, the same acid kind of smell which proceeds from the mouth of a child affected with worms was perceived. White polypous concretions were seen in the great falci-form sinus. The vessels of the pia mater were somewhat

somewhat more turgid than usual. Between that membrane and the brain, a small quantity of watery fluid was observed. The lateral ventricles contained a fluid of the same nature, and of a reddish colour. The choroid plexuses were pale, and had a few large hydatids adhering to them. The brain was somewhat softer than usual, and the cerebellum much more so.

C A S E XX. (LXIV. 2.)

A MIDDLE-AGED woman, affected with peripneumony, died in the hospital of Bologna.

Appearances on Dissection.

ABDOMEN. A substance, of a roundish form, of an inch in diameter, of a reddish colour, invested by a coat peculiar to itself, appeared in the adipose membrane surrounding the left kidney. It was neither the glandula suprarenalis, which at that side was double, nor a supernumerary kidney of a small size, nor a lymphatic gland; but seemed, from its appearance on dissection, to be an additional small spleen. For, when cut into, its circumference appeared of a bright red colour, as is often observed in the spleen; in other parts it was of a red brown colour: and although its substance resisted the knife somewhat more than the spleen does, yet every person who saw it, at once acknowledged it to be of the same nature. The

left kidney was longer than the right; which was not wonderful, since it was furnished with a double pelvis, one lying above the other, each being quite distinct. The ureters, one of which proceeded from each pelvis, opened into the bladder at the usual part by an orifice proper to each, the one being separated from the other by a small space. The internal surface of the fundus uteri was red; and although vessels were distinctly seen in the membrane lining it, no blood was discharged when the substance of the uterus was pressed upon. In the internal surface of the aorta, small white spots were observed, like incipient ossifications. Within the iliac arteries, parallel lines, in a longitudinal direction, appeared on the internal surface, which could not be obliterated even by drawing out the sides of the vessel.

THORAX A great part of one of the lobes of the lungs was swelled, indurated, heavy, and internally of a firm compact substance; which was not only of a pale red colour, like the liver when boiled, such as is often seen in inflammation of the lungs, but was also of a whitish colour, apparently from its containing purulent matter, though it was probably frozen, as intense frost prevailed at the time the body was opened. The cellular membrane of the *aspera arteria*, on the posterior part, was so much distended with pent-up fluid, that the glands commonly seen there could not
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be distinguished. The blood returning from the belly passed through the diaphragm by two orifices, contiguous to each other, instead of one. In the heart, the orifice of the coronary vein was not furnished with a membranous valve; but was closed on the right and left side with numerous slender parallel filaments, reaching from the upper to the lower part, in such a manner, that the blood could pass between filament and filament, but more readily through the middle of the orifice, where the filaments were almost wanting.

C A S E XXI. (xx. 61.)

A WOMAN above sixty years of age, who was fat and plethoric, was seized with a pain situated chiefly in the right side of the thorax; together with violent fever, great thirst, foreness and lassitude over the whole body, and painful breathing. Venesection was performed, and other means of art employed; but in vain: For the lassitude increased, she became insensible, and had low delirium. At length her expectoration, which had hitherto been in moderate quantity and not viscid, became copious, and had a purulent appearance*. Her respiration grew more laborious. Delirium took place; and she died on the eighteenth day of the disease.

Appearances

* In the original the expression is, "Tandem sputum, quod antea modicum erat, nec glutinosum, rotundum ejicitur et purulentum."

Appearances on Dissection.

THORAX. The right lobe of the lungs adhered to the pleura, and contained within its substance an abscess, round which there was great inflammation, and from which a quantity of purulent matter was discharged when the lobe was separated from the pleura. That membrane itself, and the left lobe of the lungs, were sound. In the right ventricle of the heart there was a small polypous concretion; and in the other a substance of the same kind, in an incipient state.

C A S E XXII. (xx. 35.)

A YOUNG man, nearly twenty-four years of age, was seized with a pricking pain in the left side of the thorax; attended with difficulty of breathing, great thirst, violent cough, with no expectoration. He lay on the affected side, and felt less uneasy when his head was low. At length, the difficulty of breathing having every day become greater, he died on the sixteenth day of the disease.

Appearances on Dissection.

THORAX. The left lobe of the lungs was everywhere strongly connected to the neighbouring parts: it was inflamed, and, towards the scapula, in a state of suppuration. The pericardium was so much distended with fluid, that it might very
justly

justly be deemed dropfical. Its coats were very much thickened; and certain white concreted substances adhered in some places to its internal surface, as well as to the outside of the heart. The ventricles contained fluid blood, and also two polypous concretions; that in the right ventricle being larger than that in the left.

C A S E XXIII. (xx. 49.)

A WOMAN, aged sixty years, of a slender make and sanguineous temperament, was seized with a violent fever, dry cough, and an acute pricking pain in the left side, of such a nature, that when she lay on that side it was much alleviated. After blood-letting the pain remitted so much, that she could lie easily on any side. The fever, nevertheless, and thirst, continued. She sometimes expectorated a thick matter. The difficulty of breathing became aggravated; and at length, on the thirteenth day of the disease, she died.

Appearances on Dissection.

THORAX. The right lobe of the lungs was quite unconnected with the pleura. It was of a whitish colour, marked with black spots, of a firmer consistence than flesh, and contained some tubercles filled with sanies. The pleura was quite sound. The left lobe of the lungs adhered to the pleura,

pleura at the superior part, but was much less diseased than the right; for it was only covered with black spots, and towards the throat, where it was pretty hard, contained a small abscess. In the pericardium there was an ounce of serous fluid. A large polypous concretion was seen in the right ventricle of the heart; the greatest part of which filled the cavity of the corresponding auricle, from whence it extended into the contiguous vessels. In the left ventricle there was another polypus, of a smaller size.

C A S E XXIV. (XXI. 23.)

A MAN, aged about forty years, was seized with an acute pricking pain in the right side, attended with fever and intense heat of the body. He was brought, into the hospital of Bologna, on the beginning of the fourth day of the disease. He had then a small, quick, and somewhat irregular pulse, and also frequent and weak respiration. He lay upon his back, appeared drowsy, and his intellects were deranged. He had been bled previous to his admission into the hospital. He had passed a restless night, and his respiration had become more difficult. On the morning of his admission he breathed with still greater difficulty; and stertor having supervened, he died about the end of the same day.

Appearances on Dissection.

ABDOMEN. On the small intestines, in a very few places, a slight incipient inflammation was observed. The liver appeared somewhat indurated. It was livid, both on its edge, and also to a considerable extent on its concave surface. In the latter part the livid hue was superficial, but not in the former. The spleen was so flabby, that it was very readily broken down by the fingers.

THORAX. From the pleura, near the left side of the spine, three or four tubercles, of a white colour, and of the hardness of bone, projected. In other respects, that membrane was sound. The left lobe of the lungs, although it appeared uninjured; discharged, wherever cut into, a yellow coloured fluid. The right lobe was greatly enlarged, very heavy, and much indurated; and resembled the substance of the liver, except in some parts, to a considerable extent, where it was of a white colour, and in a state approaching to putrefaction. From it, too, a fluid similar to that in the left lobe, and in greater quantity, flowed out. In all the orifices of the heart, polypous concretions were observed. Of these, the smallest was situated in the left auricle, and the largest in the right; and both were accompanied with grumous blood. The polypi, in the pulmonary artery, and in the aorta, were of an intermediate size between these two.

HEAD. The vessels of the pia mater were somewhat turgid. Under this membrane, a watery fluid was seen; and the ventricles contained a small quantity of reddish coloured fluid of the same kind. The plexus choroides were neither pale, nor free from hydatids.

C A S E XXV. (xx. 56.)

A MAN, about fifty years of age, who had for many years laboured under a leprosy of the right thigh, was affected with sore throat. After this had continued for two days, it terminated in a particular pain in the back. To this a dry cough, great thirst, and difficulty of lying on the right side, though he could easily lie on the left, supervened; and, besides, he felt a certain oppressive pain, surrounding like a belt the lower part of the thorax. Although, during the latter days of his life, the febrile symptoms appeared mitigated; and though no other marks of inflammation of the chest than those already enumerated occurred, he died on the ninth day from the time he had been confined to bed.

Appearances on Dissection.

THORAX. The left cavity of the chest was filled with purulent serous fluid. A membranous substance, which was a concretion of this fluid, adhered to the pleura of that side, in such a man-

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ner as to resemble a disease of that membrane. The pleura, which lay under this concreted substance, was inflamed ; as was also the case, though in a slight degree, with the lungs. Some very small polypous concretions lay hid in the large vessels about the heart.

C A S E XXVI. (XXI. 24.)

A MIDDLE-AGED woman, who had miscarried about the third month of pregnancy, although she had lost a moderate quantity of blood from the uterus, and had also had a vein opened, was on the eighth or tenth day after miscarriage affected, without any apparent cause, with internal inflammation of the chest. On this account she was brought into the hospital at Bologna. She then complained of pain in the chest, and of difficulty of breathing, attended with fever. She lay always on her right side, as she could neither lie on her left nor on her back. The pain was internal, so that it should not have been increased by touching the affected part ; she could not, however, describe accurately its seat. She had cough ; but expectorated nothing, at least nothing which had any reference to the disease. Deafness and pain in the ears supervened. As she had been formerly bled from the arm, a vein was now opened in the foot : but these and other means proved

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ineffectual ;

ineffectual ; for she died about the thirtieth day after miscarriage.

Appearances on Dissection.

ABDOMEN. The belly was swelled, from the epigastric region downwards ; and when the swelling was pressed upon, air was forced out at the mouth. The liver was of a prodigious magnitude, and had forced the stomach, which was distended with air, down into the umbilical region. It was throughout very much indurated, and of a colour which, although it approached to whiteness, was not very different from the natural one. The bile in the gall-bladder was almost black. The spleen was large, but nothing in proportion to the size of the liver. The parietes of the uterus were somewhat thicker than usual, but contained no blood : for, though cut into, and pressed upon by the fingers, not a drop appeared. The internal surface of the fundus was livid. One of the Fallopian tubes had hydatids hanging from its fimbriæ, by which its orifice at that extremity seemed closed up. Each tube contained such a quantity of the white puriform fluid which lubricates their external surface, that, when pressed upon at the extremity next the uterus, the fluid was forced out, and the internal orifice was thereby rendered distinctly visible. Within the middle of one of the lobes, a small body, of a black colour, and of the shape of a grape, was seen. This had a minute stalk attached

tached to it, which seemed to be, and probably was a small clot of blood. The ovaria were unequal in their surface, and each was marked with a black spot. Under these spots, a minute cyst, filled with a black globule, lay. In the centre of one of these globules, there was another hollow globule, of a smaller size, and of a mixed black and yellow colour. The remaining parts of the uterus and its appendages had a gangrenous smell. A small quantity of reddish-coloured turbid watery fluid was found within the pelvis.

THORAX. Both sides of the chest contained a little yellowish turbid watery fluid, of which there was more in the left than in the right side. The lungs adhered almost every where to the pleura. When separated, a whitish pellicle, easily lacerated followed; this was certainly not the membrane of the lungs, for that lay under it and was quite found; but whether it belonged to the pleura, as it appeared, or was of the same nature with those membranous substances seen in similar cases interposed between the pleura and the lungs, could not be accurately determined. The lungs were inflamed, especially at the posterior part, and their substance was thickened, was somewhat indurated, and was in some places of a blackish colour. In the pericardium there was a small quantity of a reddish turbid watery fluid. In each ventricle of the heart, polypous concretions of a mucus-like

like consistence, and of a whitish yellow colour were seen.

HEAD. A small mucus-like concretion, like that noticed in the ventricles of the heart, was found in the superior sinus of the falx. Under the pia mater there was a little watery fluid, but there was scarcely any in the ventricles. The brain was not at all flabby; and the choroid plexuses were in a natural state. The pineal gland was of such a size as to equal nearly that of an ordinary grape; and being slightly touched with the knife, discharged a turbid watery fluid, together with a very small quantity of a yellowish mucous matter, after which it decreased in size. When the ears were examined, the membrana tympani of each was found to be of a black colour, and exceedingly flaccid; and also the mastoid cells adjoining to the tympanum were more moist than usual. In one of the tympana, there was a kind of purulent matter; and in the contiguous part of the occiput on the outside, especially at the left side, all the cells in the integuments were filled with a watery mucous fluid. On each side, the parotid gland and meatus auditorius were found.

CASE XXVII. (XX. 13.)

A BUTCHER, aged fifty years, became affected
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with a pain in the right side of the thorax, extending to the middle of the sternum. He lay on his back, coughed much, and expectorated little. He was obliged to hold his neck erect that he might breathe. On the seventh day he died.

Appearances on Dissection.

THORAX. The right lobe of the lungs adhered somewhat to the sternum, and very closely to the mediastinum: its superior part was entirely indurated. The left lobe was on its posterior part of a black colour. On the left side also, the thoracic cavity contained a small quantity of serous fluid. The pericardium was filled with the same. In the right ventricle of the heart a polypous concretion was seen.

The blood in this body approached nearer to fluidity than to coagulation.

C A S E XXVIII. (xx. 32.)

AN unmarried woman, aged sixteen years, of a cachectic habit of body, whose menses had been suppressed for eight months, who had a spitting of catarrhus matter, felt difficulty in breathing when walking, and was accustomed to complain of a certain sensation of heat, and pain in the left side of the thorax; was suddenly affected with such extreme difficulty of breathing, that she could not possibly lie in bed. This was attended with

with the expectoration of matter tinged with blood, with the sensation of an oppressive weight in the seat of the pain, with a hard pulse, and coldness of the extremities. At length, on the fourth day from the beginning of the laborious respiration, she expired.

Appearances on Dissection.

ABDOMEN. The gall-bladder was very small, its coats were much thickened, and it contained little or no remains of bile.

THORAX. A quantity of limpid serous fluid was found in both cavities of the chest. This fluid, when set at rest, exhibited the same appearances as blood does in a similar situation; for in its middle a substance like jelly appeared, separated from, and surrounded by, the rest of the fluid. When exposed to heat, it coagulated in the same manner as the serum of the blood does. The whole left lobe of the lungs was exceedingly indurated. The right ventricle of the heart contained a very large polypous concretion. In the left, there was also a similar body, but of a smaller size.

CASE XXIX. (xx. 33.)

AN old man, aged seventy-four years, became affected with a pain of the right side, which was very distressing, rather from a sense of weight, than
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from any other cause. It was more uneasy if he lay upon the opposite side, and therefore he lay on the right side. Along with this pain he had troublesome cough, accompanied with bloody expectoration, pain in his head, watching, and more especially violent fever, attended with hard, frequent, but not very full pulse. He died on the third day.

Appearances on Dissection.

THORAX. The right side of the chest was completely filled with serous fluid. The lobe of the lungs on that side, was of a black colour, and was inflamed, indurated, and of a very compact substance. It was easily separable from its external membrane, and towards the scapula was connected to the pleura by short membranous bands. The left lobe was scarcely injured. In the right ventricle of the heart, a moderate sized polypous concretion, belonging principally to the corresponding auricle, was observed. The left contained a smaller one. The former of these concretions was continued into the vena cava and pulmonary artery; and the latter extended for a short way into the pulmonary vein, and for a considerable length into the aorta. Both concretions were accompanied with coagulated blood.

C A S E XXX. (xx. 39.)

A MAN, of about sixty-six years of age, who had long expectorated catarrhus matter, having been exposed to cold, was seized with an acute pricking pain in the left side, attended with considerable cough, and with fever. From the very beginning of the pain, he expectorated a large quantity of thick yellow matter, marked with small streaks of blood. At length the expectoration having been suppressed, he died on the seventh day.

Appearances on Dissection.

ABDOMEN. The spleen was of a reddish colour.

THORAX. A quantity of fluid, like cow-milk whey, was found in the left cavity of the thorax. The corresponding lobe of the lungs was very much indurated, and adhered strongly to the mediastinum, and to the pleura investing the ribs. The right lobe was connected in the same manner to the mediastinum and to the pleura lining the diaphragm, and more especially to that under the upper ribs at the fore part. A cancerous ulcer at that place lay concealed within the lobe: this was probably the seat of an old disease. In the left ventricle of the heart, there was a small polypous concretion. The right ventricle contained one, which was much larger, adhering to a quantity of coagulated blood.

C A S E XXXI. (xx. 30.)

A CLERGYMAN, who had just entered his twenty-third year, had about three years before been affected with acute fever, attended with a running from the parotid glands. After having recovered from this indisposition, he fell into a double tertian fever, which continued for a long time. When this at length ceased, he remained in some measure emaciated, with a pale countenance; was troubled with difficult respiration, and occasionally disturbed sleep; and his urine was almost always of a red colour. To these symptoms, an acute fever at last supervened; and, on the second day after, a pain in the right side, below the false ribs, and below the ensiform cartilage, took place. This pain was encreased on touching the affected part. On the first day of the disease, vomiting and diarrhœa attended; and he was also affected with cough, which was at first accompanied with some expectoration, but in a very short time became quite dry. As he could not lie on either side, he lay on his back. He complained of the sensation of intense heat towards the right kidney. His pulse was weak, quick, sharp, irregular, and intermitting. The disease having continued to encrease in violence, the difficulty of breathing having become every day

more considerable, and his pulse having grown very weak; he died about the end of the seventh day.

Appearances on Dissection.

ABDOMEN. All the viscera were perfectly sound, and in a natural state; except the spleen, which was four times larger than usual.

THORAX. The left cavity of the chest contained more than two pounds of liquid serum. The right cavity was filled with a thicker fluid; some part of which had become concreted in such a manner, as to form the appearance of membranous bodies floating through it. The lungs were unconnected with the pleura. The right lobe, although not much encreased in size, was entirely indurated from previous inflammation. The pericardium contained a great quantity of serous fluid, which rendered it much larger than usual. The right ventricle of the heart was filled with coagulated blood, together with a small polypous concretion. The right auricle, also, was much distended with coagulated blood; and the left ventricle contained a small quantity of the same kind of blood.

CASE XXXII. (xx. 36.)

A YOUNG man, about twenty-two years of age, after having complained of pain in his belly, which
had

had ceased, was affected with pain in the thorax, attended with difficult respiration, cough, and troublesome thirst. He lay constantly on his face, but in such a manner that he inclined towards the right side. He held also his head low, as those who have the pericardium distended with fluid generally do. All these symptoms having become aggravated, he died on the sixteenth day.

Appearances on Dissection.

THORAX. The left side of the chest contained a quantity of limpid fluid. The corresponding lobe of the lungs was perfectly sound, and everywhere unconnected. The right lobe was indurated, and strongly connected with the neighbouring parts, and especially towards the scapula, where a fluid like cow-milk whey, containing some concretions resembling the white of a boiled egg, was observed. Within the pericardium, which was much distended, and occupied a large portion of the thorax, a fluid of the same kind, with similar concretions, was found. These concretions adhered to the internal surface of the pericardium, and to the outside of the heart. Two polypous substances appeared in the ventricles of the heart; that in the right was larger than that in the left.

CASE XXXIII. (xx. 59.)

A WOMAN, aged sixty-four years, was seized
with

with a pain in the right side of the thorax, in such a manner that she lay with difficulty on that side. and could not bear to have the affected part touched. Her respiration was frequent. She had a dry cough, and a quick, small, feeble pulse. On the seventh day, a sweat broke out about the head. On the ninth day, her strength having become quite exhausted, she died.

Appearances on Dissection.

THORAX. The right lobe of the lungs appeared to be so swelled, that it filled the whole cavity on that side. It adhered slightly to the pleura, by means of a kind of membranous substance, which was interposed. This, however, was in fact, nothing but a concretion from serum, spread out in such a manner as to resemble a membrane, and to make the pleura appear corrupted *. The pleura in this case was sound. The same lobe at its posterior part, was indurated and inflamed. The left lobe was connected in several places to the pleura; but was in other respects uninjured. In the pericardium there was a great deal of watery fluid. Within the heart several polypous concretions were found. In the right auricle, a pretty large one, extending into the vena cava, and in the corresponding ventricle a smaller one, continued in-

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* An appearance of this kind seems to have imposed upon Riverius, when he said he saw the pleura corrupted in a case of pleurisy.

to the pulmonary artery, were seen. In the left ventricle, there were also two polypi of different sizes, the larger of which stretched into the aorta, and the smaller into the left auricle.

CASE XXXIV. (xx. 53.)

A MAN-SERVANT, aged fifty-five years, complained of pain in the middle part of his chest. He could lie on his back, and also in some measure on his left side. He was obliged to have his neck erect that he might breathe. He died on the sixth day of the disease.

Appearances on Dissection.

THORAX. The left lobe of the lungs, on the posterior part, had become very much indurated, and adhered strongly to the pleura, even where that membrane invested the diaphragm. The pleura was somewhat reddened. The right lobe was found; although a small quantity of ferous fluid, like pus, was observed in that side of the thorax. The pericardium contained some turbid fluid. In the right ventricle of the heart, together with a polypous concretion, coagulated blood was found. In other parts of the body the blood was in some degree fluid.

C A S E XXXV. (xx. 47.)

A YOUNG man, about twenty-six years of age, was seized with an acute pricking pain in the right side of the thorax, attended with fever and cough, with little expectoration. About the eighth day, delirium, particularly violent during the night, supervened. The pain ceased; but the difficulty of breathing became aggravated. He could lie easily on either side. On the tenth day he died.

Appearances on Dissection.

THORAX. Both lobes of the lungs were much indurated, and were towards the back connected to the pleura; to which also the left lobe adhered laterally. A white membranous substance, like a soft flaccid reticulated body, was spread over the whole of the pleura and lungs, which in some parts were thereby connected together. In both sides of the chest, but more especially in the right, a large quantity of fluid, like cow-milk whey, was found. This fluid did not separate into parts, when set at rest; but, when exposed to heat, coagulated, like the serum of the blood. The pericardium was distended with serous fluid. A polypous concretion was seen in each ventricle of the heart; that in the left was the smallest.

C A S E XXXVI. (XLV. 16.)

A MIDDLE-AGED woman, of a pretty good habit of body, and of a moderate stature, having been previously affected with catarrh, was seized with fever; on which account she was brought into the hospital of Bologna. Along with the fever, which was very violent, she had great difficulty of breathing, flushed face, a most distressing sensation of weight in the thorax, and her pulse was somewhat hard. She was exceedingly anxious to expectorate, but she could not do so. Her pulse became low and intermitting; and her respiration so difficult, that at last she could not lie. She neither complained of uneasiness nor acute pain in the back; nor was she ever affected with palpitations of the heart, nor delirium. Every necessary means were employed, but in vain; for she died on the fifth day from the beginning of her feverish complaint.

Appearances on Dissection.

ABDOMEN. The spleen was large. The liver was so very large, that, filling up the left hypochondrium, as well as the right, it had depressed the stomach; consequently a part of the œsophagus terminating in that organ, appeared two fingers breadth below the diaphragm. But, except their size, nothing uncommon appeared, ei-

ther in the spleen or liver. A thick oblong polypous concretion was found within the inferior vena cava. The uterus lay forwards, and was somewhat nearer the left than the right side. The ovaria were very long and slender, of a white colour, and indurated; and were connected to the uterus by thicker ligaments than usual. The vessels which run through the broad ligaments into the uterus, were very much distended with black blood, and were here and there varicose. When an incision was made from the upper part of the uterus to the lower part of the vagina, the fundus and cervix uteri were found full of mucus; which was almost transparent like jelly, tinged with no colour, and thinner than that usually seen about the os uteri, which in this subject was not wanting. When the mucus at the superior part was removed, a very minute excrescence, almost of a circular form, and of a reddish brown colour, was observed to project from the internal surface of the fundus; and the thick mucus at the lower part of the uterus having been removed, the inferior part of the cervix appeared of an unequal surface, from unusual short lines, of a red colour, which were placed longitudinally, and projected somewhat. The vagina, although it was not destitute of rugæ, from the middle downwards, was, in proportion to the size of the woman, who was as already mentioned of the middle stature, somewhat

what longer and broader than it ought to be; and contained a wooden ring pessary, which was a mark of former prolapsus. This pessary was of an oval form; and was placed in such a manner, that its longest axis corresponded with the length of the vagina, and the shortest with the breadth; one end of the oval being turned towards the ostium, and the other towards the orificium vaginae. The short diameter was so long as to distend both sides of the vagina; which, at the part pressed upon by the instrument, projected into an excrescence, of the form and size of a large almond kernel, of a cartilaginous hardness, and of a white colour, except that one of them was livid in the middle. These excrescences seemed to threaten an approaching change, from a scirrhus nature into something worse.

THORAX. The lungs, although turgid, adhered strongly almost everywhere to the pleura lining the ribs, especially on the left side. From the same side of the thorax, a serous fluid, which would have appeared to be white from an admixture of pus, had there been any vestige of purulent matter at that part, flowed out in great abundance: for it had been collected in such a quantity, that the diaphragm on that side, when looked at from the abdomen, appeared convex instead of concave. Part of the same kind of matter was included between the left lobe of the lungs and the

pleura investing the ribs, nearly about the middle of the dorsal vertebræ, to a great extent. Within that space white concretions, like thick membranes, appeared, adhering both to the lungs and pleura. The lobe was, at that part only, of a harder and more compact substance than natural. A great part of the pleura on both sides was of a rosy colour. The pericardium was large, and filled with the same kind of fluid found in the cavity of the chest: so that at first sight it might have been mistaken for a large open abscess, instead of the pericardium. When the fluid was discharged, the internal surface of the pericardium, and the external surface of the heart, auricles, and large vessels, appeared of a pale livid colour, and covered over with a certain white cineritious matter, like plaister newly laid on a wall; but which, in fact, was found to consist of poly-pous concretions, forming a thick flaccid membrane, that could be easily separated and readily lacerated. When this preternatural membrane was removed, the parts under it appeared in a natural state, and of a proper colour; except that the pericardium was thickened and somewhat red, as if from phlogosis, for it could not be called inflammation. The heart, which was larger than usual, contained on both sides black blood, such as had been seen in different parts of this subject;

and

and besides, some round polypous concretions in the right ventricle and corresponding auricle.

HEAD. In the medullary substance of the brain, wherever it was cut into, and on the surface of the lateral ventricles, vessels somewhat turgid with blood appeared. The lateral ventricles contained some serous fluid, of a dirty yellow colour.

CASE XXXVII. (XXI. 36.)

A YOUNG man, aged twenty-five years, of a complexion rather pale, who had formerly been affected with strumous swellings, and also, it was said, with lues venerea, having overheated himself with running (for he was a footman), was seized with rigour and fever, attended with acute pricking pain, which he said he felt almost over the whole breast properly so called, but more especially at the lower parts of the chest. His back also was pained; and he complained of soreness over the whole body, aggravated, he alleged, on being touched. He could lie only on his back. His pulse was quick and small. He had no thirst; he felt great heat internally; his respiration was difficult; and he expectorated a reddish fluid matter. On the fourth day of the disease, he had some bilious stools. On the eighth day, after having passed

a great quantity of urine, he became covered with a clammy sweat, and expired.

Appearances on Dissection.

ABDOMEN. The stomach and the intestines, especially the colon, appeared much distended with air. The lower part of the spleen was tinged with a particular blackness, to the depth of an inch and an half, just as if incipient gangrene had supervened. The liver was very large, and of a whitish colour. The gall-bladder, along with a little bile of a whitish yellow colour, contained more than seventy calculous concretions. The largest of these (of which there were very few) did not exceed the size of a bean; and the smallest were not less than a pepper corn. The former were of an oval figure, and were flat on one side. The latter were of the form of a cube. Internally they seemed composed of a kind of minute grains moistened with bile. These grains were invested all round, by a crust, which was at least double, and was mostly of a greenish colour, but in some places white. When exposed to the fire, all of them preserved the flame when they had once caught it, and now and then emitted sparks with a noise. The right kidney was exceedingly flabby. The trunk of the aorta, both in the belly and in the thorax, as high up as the curvature, was small in proportion to the size of the body and
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the other viscera ; all which were of a tolerable bulk.

THORAX. The right side of the chest contained a turbid sanious ferous fluid. Both lobes of the lungs adhered almost everywhere to the contiguous parts, and even to the diaphragm. The connections of the left lobe, at the anterior surface, were formed by filaments only ; the remaining part of the same lobe, and the right one too, throughout their whole extent, were not only firmly connected to, but also even seemed to form the same substance with the contiguous parts, by means of a thick membranous body interposed between them and the pleura. This membranous substance was of a white colour, exceedingly tough ; and in some places, on the right side, was half as thick as one's little finger. On the left side, it was much less thick and white. On the lungs being forcibly separated from their adhesions, this substance followed. When separated from the lungs, which could be very readily done, this membrane appeared sound and entire ; inasmuch so, that, unless the pleura had been observed uninjured in its natural situation on the left side, (through which the adjoining intercostal muscles appeared redder than usual), it might have been mistaken for that membrane. On the right side, however, another membrane similar to the former (which at that part had been torn off, along with

the lungs), except that it was less thick, appeared instead of the pleura. When this membrane was drawn off, the intercostal muscles were seen under it, of a white colour; so that, at this place, it was probable the pleura had become thickened in consequence of disease. The pleura, where it covered the sterno-costalis muscle, which was inflamed, was semi-putrid, and easily lacerated by the slightest touch of the finger. The fleshy part of the diaphragm, all round its middle, where the lungs adhered, seemed inflamed. The left lobe of the lungs exhibited in one place a white substance, composed as it were of tartarified grains. In almost all the other parts, it was only indurated, compact, and heavy; and it was least so on its anterior surface. The right lobe was much harder, more compact, and heavier than the left. In the pericardium there was a little more fluid than usual; and it had a turbid appearance. A whitish, yellow, rather flabby polypous concretion was seen in the right ventricle of the heart, extending through both orifices of that cavity. Similar concretions went out at each orifice of the left ventricle. Those which extended from this ventricle into the pulmonary vein, and from the right into the pulmonary artery, were divided into ramifications resembling divisions of these vessels.

C A S E XXXVIII. (xxi. 34.)

A MAN, whose trade was that of sifting wheat, an occupation very injurious to the lungs, after having been affected with pleurisy, from which he was recovering, became again indisposed. He complained of a violent pain of the thorax; and was compelled, in order to breathe, to sit up in bed. He had an excessive cough, attended with the expectoration of a small quantity of viscid bloody matter. His face was flushed; his pulse was hard, exceedingly irregular and intermitting; and he was at times affected with convulsive tremors. He was bled two or three times; the blood drawn had a thick buffy crust. His lower extremities became œdematous. Under these symptoms he died, on the eleventh day.

Appearances on Dissection.

ABDOMEN. A considerable quantity of turbid yellowish watery fluid was found in the belly. The liver was indurated: externally it was of a pale livid colour, and internally it was variegated by numerous red particles.

THORAX. Both sides of the chest, and especially the right one, contained a great quantity of turbid yellow coloured fluid; amidst which there were concretions, similar to what are seen floating at the bottom of a cask of wine. The

pleura appeared at the sides, and especially at the left, which was probably the seat of the former pleurisy, to be somewhat redder than usual. The lungs, which adhered nowhere to the pleura, had the lower part of the right lobe indurated and turgid; and at that part the substance appeared thick, and of a brownish purple colour. In other parts they were of a soft consistence. A bloody fluid was pressed from the bronchia on both sides into the trunk of the aspera arteria. The pericardium, before it was cut into, appeared much larger than usual. When opened, this was found to be owing not so much to a quantity of fluid, of the same kind with that in the thorax, which it contained, as to the size of the heart; the parietes of which indeed were not enlarged; but its ventricles (especially the right one) were greatly distended, and filled with a large quantity of black blood. The blood certainly was not very fluid; but no polypous concretions appeared in the heart, except a single thin incrustation in the right ventricle.

C A S E XXXIX. (xx. 7.)

A WOMAN, aged twenty-seven years, who though she had been married for four years, had never conceived, became affected with pain in the left side of the thorax, together with difficulty of
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[breathing,

breathing, and violent cough, attended with some expectoration. Under these symptoms she died.

Appearances on Dissection.

ABDOMEN. The fluid of the vesicles of the ovaria appeared coagulated, as if it had been boiled.

THORAX. In the left cavity of the chest, a quantity of white coloured serous fluid was found; and the posterior part of the lungs in the same cavity was inflamed. When cut into, although no abscess could be distinguished, sanious matter mixed with blood flowed out, and black spots were seen here and there throughout its substance.

C A S E XL. (XX. 20.)

A PRIEST, nearly thirty years of age, was affected with difficult respiration, and expectorated a large quantity of matter. At first he complained of pain in the right, and then in the left side of the thorax. He died on the tenth day.

Appearances on Dissection.

THORAX. Both cavities of the chest contained serous fluid, but not in considerable quantity. A part of this fluid had become concreted; and, like a pale coloured coat, covered every where the surface of the lungs. The right lobe was exceedingly red at the posterior part; it was also indu-

rated, but less so than it generally is in cases of peripneumony. About the middle of its internal substance, purulent matter had begun to be formed. The left lobe exhibited likewise marks of incipient inflammation on the back part. The pericardium was thicker than usual, and was distended with a yellow coloured ferous fluid. In consequence of the concretion of a part of this fluid, a reticulated kind of substance was extended, not only over the internal surface of the pericardium, but also over the external surface of the heart. When this substance was pressed upon, small drops of serum flowed out. The right ventricle of the heart contained a polypous concretion.

C A S E XLI. (xx. 2.)

A CARMAN, aged about fifty years, had been troubled with feverish fits for the space of a year, and more lately also, had been affected with peripneumony, dry cough, difficult respiration, and in some degree, delirium. He could not, nevertheless, be persuaded to confine himself to bed, but applied to business as usual. It was not, therefore, till about the fifth or sixth day from the first attack of peripneumony, that he came to the hospital of Bologna, to which he walked. After his admission, the above mentioned symptoms became

came so much aggravated, that he died within twenty-four hours.

Appearances on Dissection.

ABDOMEN. A small quantity of limpid watery serum was found in the cavity of the belly. The spleen appeared three times larger than ordinary.

THORAX. The right cavity of the thorax contained some ounces of turbid serous fluid. The superior lobe of the lungs, on that side, was entirely inflamed, especially towards the posterior part. When cut into, very small abscesses, containing sanious matter, were found everywhere dispersed here and there throughout its substance. The pleura was found. The cavity of the pericardium was half filled with its own proper fluid. Polypous concretions were found in the heart. Those in the auricles were the larger : those in the ventricles, at the orifices of the arteries, were the smaller ; and of them the largest was situated in the right ventricle.

C A S E XLII. (XXI. 17.)

AN old man, above sixty years of age, became affected with fever, and at the same time with an acute pricking pain in the anterior part of the right side. He lay upon his back. His tongue was parched, and his pulse full and frequent. After having been treated for some days in the ordinary manner,

manner, in the hospital of Bologna, he seemed to be so much relieved of fever and pain, that the senior physician allowed him to indulge freely in the common diet of the house; and three days after ordered him a purge, according to custom. Having, in consequence of this permission, eaten a great deal, the fever and pain of the same part returned on the succeeding night. His pulse became hard, frequent, full, and vibrating; and continued so till within a few hours of his death. His respiration was hurried; but was not very bad. Having spontaneously raised himself into the sitting posture, although he appeared as if he should live for some days, he was suddenly affected with ster-tor, and died.

Appearances on Dissection.

EXTERNALLY. His body had an ugly appearance. It was much emaciated; the thighs were scabby; and the abdomen had fallen in.

ABDOMEN. That particular kind of smell which generally arises from inflamed intestines, was perceived on opening the belly; and, accordingly, considerable portions of the small intestines were in different places found to be of a very red colour. The edge of the liver, and its hollow surface on the contiguous part, to a small extent, was of a livid colour. The gall bladder had tinged the pylorus and duodenum very deeply; but the colour did not penetrate their coats. The flat
surface

surface of the spleen was very black. The pancreas was a little indurated.

THORAX. The upper part of the right lobe of the lungs was enlarged, and appeared to be much indurated. When cut into, pus, or matter resembling it, together with a frothy fluid, were discharged; and its substance resembled part of the liver. A small quantity of greenish yellow coloured fluid was found in the left side of the thorax. The left lobe adhered to the pleura towards the diaphragm, and more closely on the upper side, through the interposition of a yellow thin membranous substance. The inferior part of the same lobe was black and indurated, and was of the same substance as that of the right; and like it, too, contained purulent matter of a whitish colour, which was discharged when the lobe was drawn out of the thorax. The pleura was quite found. In the pericardium there was a large quantity of greenish yellow coloured watery fluid. Polypous concretions were seen at each of the orifices of the heart; the smallest extended into the left auricle, and the largest into the aorta. That vessel was much wider than usual, but had no inequalities. Points of incipient ossifications were seen upon its internal surface beyond the valves.

CASE XLIII. (XXI. 30.)

A MAN, aged fifty-six years, of a tall stature, and of a pretty good habit of body, but irregular in his mode of living, having undergone much fatigue in ringing church bells, (the means by which he gained his bread) had complained for some days of a slight pricking pain within the breast, at the lower part of the sternum. The pain became much more violent; and upon the same day, fever and difficulty of breathing supervened. He had two or three spontaneous stools, consisting of a bilious frothy matter. He was brought into the hospital of Bologna so late, that he could not be bled till about the end of the fourth day of the fever. The blood contained little serum, and had a whitish yellow crust of about two inches in thickness. On the fifth day his pulse was full and hard: he had scarcely slept during the night; and he could not breathe freely. The urine which he passed during the end of the fifth day was of a deep colour, and not very clear. His pulse, at the same time, was frequent, irregular, and not hard. His respiration was difficult, and attended with moaning. The pain was unabated; he could lie easily on either side; and he expectorated a thick frothy matter with yellow streaks. During the night he was
much

much distressed with the pain and cough. In the morning the pain was alleviated: but his pulse and expectoration were as on the preceding day; as was also his urine, except that it was passed in small quantity, and was of a reddish colour, and somewhat turbid. Towards the end of that day, which was the sixth of the disease, blood was drawn from his right hand; but as it was all received into water, it could not be properly examined. On the beginning of the seventh day he seemed better; but towards the end of the same day, his pain became aggravated, his pulse smaller and more frequent, his respiration hurried, and his tongue parched. He passed a restless night. In the beginning of the succeeding day he had profuse sweat, which was encouraged by gentle means; but without producing any relief. Towards the end of that day, his breathing was very much hurried; his pulse small, affording little resistance to the finger when pressed. He expectorated a yellow matter, which was fluid, and not frothy; and his urine continued to have the same appearances. About the beginning of the ninth day, he could at pleasure put his arms without the bed-cloaths; and could also speak, though with some difficulty. From these circumstances, those about him did not imagine that he was dying; yet he soon after expired.

Appearances on Dissection.

ABDOMEN. Externally the belly was livid about the ilia; and under that part the colon, which was distended with air, though in every other respect sound, lay. The liver extended so much across the body, that it covered the whole upper part of the spleen, to which it was closely connected. Its edge was for a considerable space livid; as was also its concave surface, to the extent of three fingers breadth: but the lividness was quite superficial. It was not harder than usual, but was a little whiter. The gall-bladder contained very little bile; though the antrum pylori, which lay under it, was tinged with that fluid. It had in it, however, twenty gall-stones, of various sizes, but most of them small; except one, which was very large, and which, like the rest, resembled charcoal in colour, in roughness, and in brittleness of substance. None of these gall-stones, when exposed to the fire, emitted flame or sparks; but they sometimes crackled a little. The spleen was large, even in proportion to the stature of the man: it was flabby, and externally of a whitish colour. The external surface of the stomach, on the whole of the left side, was marked with large, and as it were, ramifying spots, of a blackish livid colour. On the internal surface, too, similar spots appeared, extending to the œsophagus; and about them drops of blood, sticking
between

between the coats and the stomach, were seen: so that, from every circumstance, there could be no doubt of the stomach having been inflamed.

THORAX. Each side of the chest contained watery fluid; and that on the right side at least was turbid and of a yellow colour. Both lobes of the lungs were at the upper part connected to the pleura; which, there, and in some other parts of the right side, was considerably thickened. On the same side, pieces apparently of that membrane lay on the surface of the lungs, which was in other respects sound. The right lobe of the lungs was very heavy, and its substance throughout resembled that of the liver: it was of a whitish colour, and indurated, but less so than usual under the same circumstances. It appeared semiputrid; and more especially, as a whitish turbid fluid was in many places discharged from the bronchia when cut into. Over that surface of the lungs, contiguous to the mediastinum, next the pericardium, and over the mediastinum itself, a thickish reticulated substance, of a yellowish colour, and of a beautiful appearance, was extended. It could be easily drawn off: this was also the case with respect to another membranous substance, of a bloody colour, which was also spread over the mediastinum at the same part. No such appearance occurred in the left side; and on that side the lungs were found, or nearly so. In the pe-

ricardium there was a good deal of the same kind of fluid seen in the right side of the chest. The heart was very large, and exceedingly flaccid. It contained two polypous concretions. The one of which beginning in the right auricle, was from thence extended through the adjoining ventricle into the pulmonary artery. The other, which was somewhat thicker, and much larger, filled almost the whole of the left ventricle, and from that was continued into the aorta. When it was drawn out of that vessel, a column of strongly coagulated blood of the length of a span followed. Nor was the blood contained in the vessels above that, less coagulated, as appeared when the neck was cut into. The vessels of the larynx and pharynx were turgid. The face was of a livid red colour; and the external ear contained a little half-coagulated blood.

C A S E XLIV. (xxi. 32.)

A WOMAN, aged forty-five years, affected with an ulcer of long standing in one of her legs, with a dry scabby eruption over her whole body, and with a kind of slow fever, was admitted into the hospital of incurables at Bologna. Previous to her admission, she had drank such a quantity of wine, that she had scarcely tasted any thing else for three days; in consequence of which, she was
very

very hot and restless during the first night of her residence in the hospital. Next morning she was better; but her pulse was frequent, quick, hard, and cord-like, though it did not resist much when pressed by the fingers, nor yet was it full. In the evening, she again became hot, and had felt an acute pricking pain at the lowermost true rib on the left side. The pain was aggravated neither by external pressure, nor by lying upon that side. She lay, however, more easily on the right side; for, when on the left, the cough which in this disease always attends, was excited. The pain afterwards ceased, and did not again recur; so that she seemed to be somewhat better, more especially as the pulse, though in other respects the same, had become less frequent. But on the fourth day, after a shivering fit, succeeded by a hot one, she became worse; and along with her cough, which had hitherto been dry, she expectorated a bloody matter, of a cineritious livid colour, and of a fetid smell. She could not breathe unless her neck were erect. Her pulse became smaller and weaker, and she expectorated black coloured purulent matter. A slight delirium supervened. The exacerbations of the fever occurred at a later hour on these latter days. In the middle of the sixth day, she died as if she had been suddenly suffocated.

Appearances

Appearances on Dissection.

ABDOMEN. All the viscera were found.

THORAX. Each side of the chest contained a small quantity of fetid serous fluid, of a cineritious colour. The lungs adhered very slightly to the pleura. That membrane, on the left side, where the lungs had adhered, was in different places rough and unequal, in consequence of small red coloured tubercles. Adjoining to the left lobe of the lungs, at that part where it is contiguous to the diaphragm, there were two false membranes, one of which adhered to the lobe itself, and the other to the diaphragm. That lobe was not red, but of a livid colour, and was of a harder consistence than the liver. When cut into, matter like what had been expectorated was found in its internal substance, and especially in certain sinuses, as it were, which contained yellow pus. No hard nor particular coat invested those sinuses. There was nothing within the aspera arteria. The other lobe was quite sound. Small polypous concretions were observed in the vena cava and in the pulmonary artery; and a pretty large one in the left auricle.

C A S E XLV. (XXI. 3.)

A ROBUST young man, about eighteen years of
age,

age, affected with pneumonic inflammation, died within eight days.

Appearances on Dissection.

ABDOMEN. Some effused ferous fluid was seen in the abdominal cavity. The edge of the liver was livid. The intestines were in some places of a reddish colour, and had a strong smell.

THORAX. The right lobe of the lungs adhered strongly everywhere to the neighbouring parts, by means of a thin membranous substance. The upper part of the same lobe was much indurated, and very heavy; its substance resembling that of the liver: an appearance which took place in the remaining part of the same lobe, and throughout the greatest part of the left. The left side of the thorax contained a large quantity of bloody, black-coloured, watery fluid; and a good deal of similar fluid was found in the pericardium. The right auricle of the heart was very much dilated, probably in consequence of its having easily yielded to a quantity of blood thrown into it during the last moments of life. The blood was black and grumous, and surrounded a large firm polypous concretion, part of which belonged to the adjoining ventricle. Another substance, of the same kind, but of a round form, appeared in the pulmonary artery. The left ventricle and auricle contained no such substance; nor had there ever been any
blood

blood in them, except it had flowed out during the dissection.

CASE XLVI. (XX. 17.)

A YOUNG man, almost thirty years of age, after much working, became affected with a slight dull pain in the left side of the thorax. At the same time he was feverish, he breathed with difficulty, and had no expectoration. These symptoms continued for fourteen days, about the end of which time they seemed somewhat alleviated. But, on a sudden, great difficulty of breathing, attended with ster-tor, and the expectoration of a rosy coloured matter, which he spit up in great quantity and with no difficulty, supervened. He had lain during the whole course of the disease upon his right side, and sometimes upon his back. On the seventeenth day, while turning upon the right side, he expired.

Appearances on Dissection.

THORAX. The pleura appeared sound, and totally unconnected with the lungs. The left lobe of the lungs was universally inflamed, except at the superior part. From that part, although sound, blood flowed in drops at two places; so that more than four pounds of that fluid were found flag-nating in the left side of the chest. The heart contained two polypous concretions.

C A S E XLVII. (LVIII. 13.)

A BUTCHER, aged about forty years, affected with lues venerea, often intoxicated, and so subject to diseases of the thorax, that he had been repeatedly in the hospital of Padua, on account of such complaints, was again admitted into that hospital. He laboured under acute fever; and was troubled with constant cough, which was so much aggravated three or four times every hour, that he became livid from the exertion. He had also purulent expectoration, and a hard chord-like pulse. Venesection was twice performed, and the blood at both times had a buffy coat. Having been thus affected for fifteen days, at last, within the space of a single day, his strength failed more and more, and he died.

Appearances on Dissection.

THORAX. The lungs were quite putrid, and had a very offensive smell. The heart was flabby. In one of the valves of the aorta, the Papilla Arantii was much larger than natural. The membranous layers of which the valve is composed, at the surface, under the above-mentioned papilla, that is, opposite to the other valves, were separated from each other to a considerable extent, so that a probe could be introduced into the opening. The contiguous portion of the trunk of the aorta was

marked internally with white spots, and was somewhat unequal on its internal surface. The aorta, at its arch, was distended into an aneurism.

C A S E XLIII. (xx. 43.)

AN unmarried woman, of twenty-two years of age, was seized with a fixed acute pricking pain in the right side, attended with cough, expectoration, difficulty of breathing, and fever. She could lie in no situation, but upon the pained side. In the progress of the disease, her expectoration became tinged with blood, and one day a large quantity of that fluid was spit up. For some days before death she was affected with pains about the ilia. On the ninth day, convulsive motions having supervened, she died while lying on her left side.

Appearances on Dissection.

ABDOMEN. Some serous fluid was seen in the belly. The spleen was very large. The greater part of the small intestines were inflamed.

THORAX. The right lobe of the lungs was strongly connected to the pleura. Its whole substance was greatly inflamed, and in one part next the pleura an ulcer was observed; between which and the pleura some serous fluid appeared. The left lobe approached towards a black colour; and was also marked here and there with black spots. The left side of the thorax contained
some

some ounces of serous fluid. Two polypous concretions were seen in the heart; the smaller lay in the left ventricle; and the larger filled the whole of the right auricle, which was very much dilated.

C A S E XLIX. (xx. 45.)

A MAN, aged fifty years, was seized with an acute fever, laborious respiration, pain, extending from the sternum almost to the abdominal muscles, and most distressing cough, which occasioned great pain about the left breast and false ribs. He could lie on neither side. He had no expectoration. On the fifth day of the disease he died.

Appearances on Dissection.

THORAX. When the sternum was raised, a small quantity of dark-coloured serous fluid flowed out from the left side of the chest. The left lobe of the lungs was much indurated, approached towards a greenish colour, and was marked with black spots. When cut into, a watery and putrid colluvies, with blood intermixed, was discharged. Polypous concretions were found on the ventricles of the heart.

C A S E L. (xx. 41.)

A WOMAN, of sixty years of age, was seized with an acute pricking pain in the right side of

the thorax, so that she could not lie on that side. She was troubled with cough, attended with little expectoration. She breathed uneasily, but not with excessive difficulty; and her strength was entirely exhausted. The pain afterwards became so much alleviated, that she could lie easily on the affected side. Her pulse however having every day grown weaker, she at length died.

Appearances on Dissection.

ABDOMEN. Within the membrane of the spleen, an osseous body, of a spherical form, was found.

THORAX. Both lobes of the lungs adhered to the pleura. The right lobe, which adhered more closely than the left, was at the superior part much indurated. In the same part an abscess was observed: this, when cut into, discharged a large quantity of dark-coloured ferous fluid. The contiguous substance of the lungs was tinged with the same colour, and seemed in some measure affected with gangrene. The left lobe, which did not like the right consist of a single portion, but was composed of several lobules, was slightly inflamed at the posterior part, and throughout the whole external surface was here and there marked with black spots. Much watery fluid was found in the pericardium. Both ventricles of the heart contained a large polypous concretion; that in the right was the largest. The blood in this subject was almost completely coagulated.

CAUSES

CAUSES OF PNEUMONIC INFLAMMATION.

PREDISPONENT CAUSE. There is a natural and acquired predisposition to pneumonic inflammation. Under the former head, may be classed the general disposition to inflammatory complaints and straitness of the chest. Under the latter, certain occupations in life, as the dressing of flax, sifting of wheat, chisseling of stones, &c. and former inflammatory affections of the lungs.

EXCITING CAUSES. Every circumstance which is an exciting cause of general inflammation, may, in a person predisposed to it, induce pneumonia; such as, exposure to cold, &c. Violent or long continued exertion of the lungs, too, whether in speaking, singing, or blowing on musical instruments, is found to be productive of the same effect where there is a general inflammatory predisposition; even although no cause, directing the inflammation immediately to the lungs, shall concur. Cutaneous eruptions also, particularly measles, often prove exciting causes of this disease.

Besides the exciting causes now enumerated, MORGAGNI has mentioned some circumstances, (Epistle xxi. N^o 43. & 44.) which seem to show, that pneumonia may arise from the presence of
worms

worms in the intestinal canal. He states particularly, that pneumonic inflammation, attended with worms, was very prevalent at Farnese in the winter of 1705 *. But as the disease was not cured

* Dr. Pedratti, who then practised at Farnese, gave MORGAGNI the following account of the symptoms which characterized that epidemic. The first symptom was pain in the side, rather obtuse than acute; at the beginning tolerable, and throughout its course sometimes intermitting. In the mean time, signs of worms harbouring in the alimentary canal appeared; and besides, some of those animals were thrown off by vomiting, and some of them were seen in the fæces. At the same time there was violent cough, attended with the expectoration of a white crude matter tinged with streaks of blood. Fever, ushered in by shivering, continuing uniformly without either remission or exacerbation, accompanied these symptoms. The pulse was low, small, and unequal. About the fifth, or at the utmost the seventh day, the disease, instead of being aggravated, seemed rather to decrease in violence: so that the patient appeared in a way of recovery, the pain and cough having ceased, and the fever even being much moderated. Soon after this, however, all these symptoms became more violent than before; with the addition of so great a difficulty of breathing, and such prostration of strength, that death, preceded by burning heat in the internal parts, while the external surface of the body was cold, and, what was the most certain sign of approaching dissolution, universally livid, like that of a dead body, took place within forty hours. Vomiting, at the beginning of the disease, especially when excited by the preparation called Ruland's Water, was found useful in robust patients. But purging, even by means of fresh drawn almond oil, or by calomel combined with a little myrrh and coralline, did not produce such good effects. For although, by the latter medicine, the worms, which were of the lumbricus species, were in a wonderful manner expelled; yet immediately after, the stools, the pain was aggravated, and the inflammation

cured by the expulsion of the worms, and as the appearances on dissection in those who died of that disorder were pretty nearly the same as in other cases; it is more probable that the presence of the worms was an accidental circumstance only, than that it could be an exciting cause of the disease.

REMARKS ON THE CASES OF PNEUMONIC INFLAMMATION.

IN these cases, the various degrees of the several fatal terminations of pneumonic inflammation are very accurately pointed out. Thus, in the first ten cases, inflammation and induration of the substance of the surface of the lungs are exhibited. In the two following ones, the pericardium and pleura investing the ribs had also been inflamed, and the

inflammation seemed increased. On the other hand, by the use of the oil, the expectoration appeared at first to be rendered more easy; but soon afterwards, as if the lungs had been thereby relaxed, the difficulty of breathing became greater, and the death of the patient was accelerated. For these reasons, it was necessary to lay aside the employment of those medicines. Besides, as blood-letting was found to depress the strength, it could not be had recourse to, except in cases where the inflammatory symptoms were exceedingly urgent, and then a small quantity only was taken away at a time.

the inflammation had there terminated in effusion. From the fourteenth to the twenty-fourth, both inclusive, the various gradations in effusions within the substance of the lungs, from bloody serum to perfect pus, are well marked. The succeeding cases as far as the thirty-eighth, are instances of empyema existing, either simply or combined, with exudation from the surface of the pericardium. Empyema and vomica were joined in the following eight cases. The forty-fifth and forty-sixth, are examples of bloody extravasations within the thorax; and the four last cases seem to shew the progressive stages of gangrene.

The observations already offered respecting the phenomena of inflammation, render it unnecessary to introduce any extended remarks in this place.

The histories of the first ten cases prove, that a degree of inflammation in the lungs, which in many other parts could not be productive of much injury to the system, occasions fatal event.

The induration of the substance of those organs, it has been already alleged, is owing to many of the vessels distributed over the air cells being distended with blood: but it is probable that some other circumstance concurs; for in that state their substance is as compact and heavy as that of the liver, and, like it too, exhibits a smooth shining surface when cut into.

In the first case, although delirium had taken
I place,

place, there was no inflammation within the cranium.

The seventeenth case affords an instance of the general fatality of acute diseases during pregnancy. Under such circumstances it commonly happens that abortion precedes the fatal event: but this furnishes an exception to the general rule.

Case eighteenth contains the history of a patient who died from pneumonia, which was in the winter of 1738 epidemic at Padua, especially in some convents of nuns. MORGAGNI seems to hint that the disease was deemed contagious: but he asserts, as a proof of the contrary, not only that it was not communicated to the attendants of the sick, but also that all who were affected had a previous disposition to pneumonic inflammation.

The twenty-fifth case is an example of cynanche terminating in pneumonia.

The symptoms of the thirty-first case resembled so much those of inflammation of the liver, that Valsalva, after considerable hesitation, concluded it to be that disease. He was led to form this conclusion from there being no symptoms distinctly characterising pneumonia, and from the patient constantly pointing with his own hand to the region of the liver as the seat of the pain. It must be allowed that every symptom of hepatitis was present, except the pain in the clavicle or shoulder, which alone in this instance might have shewn that there

was no inflammation of the liver. At the same time, cases of pneumonia may occur, attended even by this symptom. Fortunately the practice in both cases, being nearly the same, is not very materially influenced by the distinction of the diseases.

In seven cases, viz. the eighth, nineteenth, twenty-fourth, forty-second, forty-third, forty-fifth, and forty-eighth, some of the contents of the abdomen were inflamed. Whether this is to be regarded as an accidental circumstance, or as the consequence of sympathy, remains to be determined.

SECT. IV. *HEPATITIS*; OR, INFLAMMATION OF THE LIVER.

HEPATITIS is said to be characterised by pain and tension in the region of the liver, the pain extending to the right clavicle and top of the shoulder; difficulty of lying on the left side, breathlessness, dry cough, vomiting, hiccup, and symptoms of inflammatory fever*.

In

* Vid. Cullen Nosolog. Method. edition quart. vol. ii. p. 113.

In temperate climates this disease occurs rarely; but the consequences of inflammation, as scirrhus hardness, suppurations, &c. are often observed in the liver after death, when no symptom indicating inflammation of that organ had preceded. Such cases have been termed Chronic Hepatitis: a title which appears exceedingly improper.

The symptoms of true hepatitis are different in different cases.

Sometimes the pain resembles, both in the sensation it communicates, and in its seat, that of pneumonia, and, like it too, is increased by respiration; but it is different in one respect, viz. in being aggravated by the touch. In such cases, the seat of the inflammation is found to be on the convex surface. In other cases, the pain is attended with vomiting, great anxiety, and jaundice. Under these circumstances, the concave surface of the liver is chiefly affected.

Obstinate constipation is said to attend at the beginning, in many cases. In others, the fæces passed have a white appearance.

This disease is by no means so dangerous as the inflammation of other abdominal viscera: for it often ceases spontaneously, terminating by a critical discharge of urine, sweat, bilious stools, or hæmorrhagy from the nose or seat of the piles.

Where it ends fatally, it seldom proves rapidly or suddenly fatal; probably never, unless where

the inflammation is communicated to the stomach or bowels. It most generally terminates in suppuration and abscess, from which the matter is forced into the abdomen or thorax; and hence the patient either becomes hectic, or is suddenly suffocated.

But even when suppuration ensues death is not always the consequence: for sometimes the matter is by the biliary ducts conveyed into the intestinal canal, and so thrown off; sometimes it is discharged by an external opening through the parietes of the abdomen; and sometimes too it is coughed up from the lungs. Gangrene seldom takes place.

The seat of the disease is probably first in the external membrane of the liver, from which it is communicated to the parenchymatous substance. Some authors have supposed that, in true hepatitis, the inflammation is confined to the former of these parts; and in what they have styled the chronic hepatitis, it is exclusively seated in the latter *. But this opinion is not confirmed by the appearances on dissection.

CASE

* See Dr. Cullen's First Lines, par. 418.

CASE OF HEPATITIS.

(XXXVI. 4.)

AN old woman, more than sixty years of age, had long complained of a pain above the umbilical region, attended with thirst, cough, and the expectoration of a catarrhus matter. Towards the end of her life her respiration was difficult ; and a few days before death, her belly became suddenly much swelled, and her feet œdematous. At length, the pain above the umbilicus having gradually abated, she died.

Appearances on Dissection.

ABDOMEN. The belly contained a great quantity of limpid watery fluid. No vestiges of lymphatics were perceived. The spleen was twice the ordinary size. The liver was indurated. A congeries of vesicles, from which serum was discharged when they were ruptured, appeared adhering to one part of the liver. Within its substance, next the diaphragm, the cavity of an abscess, occupying more than one third of the organ, was found. From this the matter had burst through the diaphragm into the right cavity of the chest, which was filled with sanious matter. The included lobe of the lungs, however, was
3 found.

found. The gall-bladder was full of smooth calculi.

CAUSES OF HEPATITIS.

PREDISPONENT CAUSE. The most probable conjecture on this subject, is, that the use of particular kinds of food predisposes to this disease.

EXCITING CAUSES. All the general exciting causes of inflammation may induce hepatitis. Of this the most frequent is external violence, and more especially, it has been observed, if that accident have occasioned fracture of the skull. It has been also alleged, that certain passions of the mind, violent summer heats, violent exercise, intermittent and remittent fevers, solid concretions or collections of fluids in the liver produced by unknown causes, and chronic inflammation of that organ, prove exciting causes of the disease *.

REMARKS ON THE CASE OF HEPATITIS.

MORGAGNI regrets that the symptoms of the case were not more accurately marked by Valsalva.

* Vide Dr. Cullen's First Lines, par. 416.

va. The author of these remarks has ranked it as an example of hepatitis, from considering not only the appearances on dissection, but also the expression in the history of the case, that "the pain gradually abated." This, in his opinion renders it probable that the pain had been a principal symptom.

Although the morbid appearances be not detailed so accurately as might have been wished, there is reason to conclude that both the external membrane of the liver, and the parenchymatous substance had been inflamed. It cannot however be determined, whether the inflammation had originally begun in the former or in the latter part.

The exciting cause was probably the congeries of vesicles attached to the external surface of the liver.

SECT. V. *GASTRITIS*; OR, INFLAMMATION
OF THE STOMACH.

THE symptoms which characterise this disease are by no means accurately pointed out by authors; a circumstance that may be attributed to two causes, The infrequency of the case, and the
extensive

extensive nervous influence of the affected organ. While the former of these causes prevents any individual practitioner from collecting such a number of observations as entitles him to draw general conclusions; the latter must vary the type of the disease, in different cases, according to the susceptibility of impression of the nervous system in the person affected.

The symptoms commonly enumerated * are, fever, with small, quick, hard pulse; violent burning pain in the region of the stomach; painful vomiting, more especially after any thing is swallowed, whether it be liquid or solid; most distressing thirst; constant watching; great restlessness, and continual tossing of the body; hiccup; difficult respiration; coldness of the extremities; fainting; intermitting pulse; and convulsions.

In addition to these symptoms, Dr. Cullen has remarked that gastritis is attended with greater loss of strength than any other inflammatory disease; and Meza has mentioned, that suppression of urine, without any distension of the bladder, or, in other words, the suspension of that secretion, takes

* Vide Translation of Hoffman, revised by Dr Duncan, vol. i. p. 229. Macbride's Works, 4to edit. p. 449. Meza, loco citato, p. 27. Joseph Quarin, loco citato, p. 351. Dr Cullen's First Lines, vol. i. p. 412.

takes place. In the following cases, purging as well as vomiting occurred.

The pathognomonic symptoms are said to be, violent burning pain, with swelling about the stomach, painful vomiting and eructation, and hic-cough. But a case is noticed by De Haen*, where not only was the vomiting absent after the first attack, but also did the appetite for food continue unimpaired. On the other hand, Sauvages observes†, that a disease prevailed at Montpellier, in the summer of 1760, which resembled gastritis in every symptom, but that of vomiting. He imagined that the sterno-costalis muscle had in these cases been inflamed.

The event of this disease is seldom favourable, as it most generally terminates in suppuration and ulceration, or in gangrene. Death, too, sometimes happens merely from the violence of the inflammation, before either suppuration or gangrene can take place. This can only be accounted for from the wonderful connection between the vascular and nervous system, and the great nervous influence which the stomach possesses.

The seat of the disease has been said to be either in the villous coat of the stomach, or in its nervous coat, as it is termed, and the peritoneum

VOL. I.

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investing

* Ratio Medendi, vol. iii. p. 30.

† Nosolog. Method, tom. i. p. 478.

investing it. In the former case, the inflammation is of the erysipelatous kind ; in the latter, of the phlegmonic. The latter alone is attended with the symptoms constituting gastritis. The former is commonly a symptomatic disease ; and is not accompanied by marks of general inflammatory affection, nor by acute burning pain in the stomach.

CASES OF GASTRITIS.

C A S E I. (XXX. 4.)

A NOBLEMAN, aged forty-two years, became affected with a double tertian fever, which, during the first paroxysms, was accompanied with mild symptoms. On the fourth accession, however, the symptoms were exceedingly violent, for the cold fit continued seven hours. He had very troublesome thirst ; his tongue was rough ; his breathing difficult. He was languid ; his pulse was small and weak ; and he complained of pain, and sense of fulness in the stomach. He was at the same time so uneasy and restless, that he could not continue even for a little time in the same part of the bed. All these symptoms became milder when the hot fit took place, and when he was allowed to drink distilled water. But this relief lasted only

ly a short time; for an aggravation of his complaints soon returned, and he continued much distressed during the whole of that night. Early in the morning he felt an inclination to vomit, which at first could not be excited even by the irritation of the fauces by his fingers, which he did several times. Soon after, however, he vomited about four pounds of fluid, resembling in colour water in which chocolate had been dissolved. In this fluid, membranous-like substances, of the same colour, floated; and from it the same kind of smell usually emitted from the bodies of those affected with fever proceeded. Although the affection of the stomach abated somewhat after the vomiting; the other symptoms not only continued, but were even aggravated. In the morning venesection was had recourse to. The blood drawn in the first cup had its crassamentum softer than usual; had a thin crust on its surface, and exhibited a milky-like serum: but in the second cup, the blood was much less altered. Notwithstanding the employment of these and other means, almost the same quantity of the same kind of fluid as that formerly mentioned was vomited within a few hours; and this a little after happened again and again: so that the whole quantity vomited during that day was equal to sixteen pounds. On the following night all the symptoms were violent; and besides, a tremor of the left

arm supervened. This recurred frequently, especially when the arm was exposed to the air; and was always preceded by delirium. In the morning this tremor was converted into a kind of epileptic paroxysm; by which not only his arm, but also his mouth, eyes, and left thigh, were violently convulsed. These symptoms continued for many hours; and at length the affected arm became paralytic. The epileptic fits recurred so frequently, that more than twenty took place within an hour. At the same time, too, the vomiting became more frequent; and the matter thrown up was of a porraceous colour, and had small membranous portions floating in it. Singultus, which had begun about mid-day, (after the paralytic attack) now became more violent. Although all these symptoms seemed somewhat abated in the afternoon, on the approach of evening they were aggravated; and the pulse and strength having failed more and more during the whole of the night, while he continued distressed with vomiting, delirium, singultus, and frequent violent, though short, spasmodic attacks, he died in the morning.

Appearances on Dissection.

ABDOMEN. The belly and the intestines were swelled. The anterior surface of the stomach and intestines were tinged with the same colour as the matter which had been vomited. Internally the
stomach

stomach was inflamed, and all its most minute vessels were very much distended with blood. The gall-bladder, although it contained no bile, was turgid from air.

THORAX. The right lobe of the lungs adhered strongly to the pleura: both it and the left were tinged with a black colour, and were full of ichorous matter. In the right ventricle of the heart there was a thin polypous concretion.

C A S E II. (XXIX. 18.)

A MAN, aged forty years, of a brawny make, and accustomed to intense thought, having been affected for some days with pain in the head, and a sense of heat in the parts on making water, was seized, after supper, at which he neither eat too much, nor any thing unwholesome, with excruciating pains in the region of the stomach. The pain of the head continued, and the pains in the stomach became aggravated. He discharged, by the mouth and by stool, a large quantity of green-coloured matter. Under these circumstances, he died at the beginning of the third day.

Appearances on Dissection.

ABDOMEN. The right side of the stomach was found; and on its internal surface, about the antrum pylori, to the extent of several fingers breadth, numerous lenticular glands, much enlarged,

larged, appeared. The fundus, on the left side, was marked with bright-coloured bloody spots. Some of these spots having begun to be covered with an ugly ferruginous incrustation, showed that the inflammation had approached to the state of gangrene. On the same side, at the part on which there were no spots, the internal coats seemed sound; but discharged blood very readily when pressed. The duodenum, and rest of the intestinal canal, exhibited no morbid appearance. The gall-bladder, at the distance of two or three inches from the lower part of its fundus, was contracted, and became again dilated before it terminated in the cystic duct: so that it appeared to form a double gall-bladder.

THORAX. The lobes adhered, by means of their own membrane, to the parietes of the chest, and also to the mediastinum: they were however sound, although their posterior part was red. The back and posterior parts of the arms were also of a red colour. The heart contained no blood, either within the ventricles or auricles.

C A S E III. (XXIX. 20.)

A POOR country woman, apparently about fifty years of age, was subject at times to difficulty of breathing, together with a sense of straitness in the chest; accompanied with hard pulse, and with
so

so great pulsation in all the arteries, that their alternate action could be distinctly seen both in the hands, in the neck, and in the temples. When distressed with the difficulty of respiration, she was accustomed to come to the hospital of Bologna, where she was relieved by being bled freely. The blood drawn at these times was somewhat hard. In this manner she lived for four years; when at last having at her own home became affected with pains in the stomach, she died within twenty-four hours.

Appearances on Dissection.

ABDOMEN. The stomach was large, and half full; but when opened, it seemed astonishing that all its contents had not been evacuated by vomiting. For internally it appeared eroded in several different places. The erosions, although evidently recent, were already affected with a gangrenous colour. They were exceedingly numerous, and very minute about the pylorus; from which they also extended to the contiguous part of the duodenum. Erosions, of a larger size, were seen here and there on the fundus, about the cardia, and even in the œsophagus. These erosions, therefore, seemed to have been produced by what had been swallowed: but what that was, could not be learned, neither from the previous history of the case, nor from an examination of the matter that remained in the stomach. The spleen was somewhat

what larger and more flabby than usual ; and was glued to the diaphragm for a considerable extent, and also to the stomach in a small degree : this might perhaps arise from its large size. The uterus lay very much to the left side ; and on that side the round ligament was shorter than on the right. Within the cervix uteri, at one side, a small thick white membrane, of a pyramidal form, adhered, by a flattened head, which seemed to be the remains of a hydatid formerly distended with fluid. The sanguiferous vessels of the urinary bladder, even from the openings of the ureters, were so exceedingly red, that, although they were very small, they could not have been better seen, nor could their anastomoses have been more distinctly marked, had they been filled with wax. In this manner they were continued from both sides into the urethra ; along the internal surface of which they were observed in great numbers, and much distended ; but, on that account, they did not form so beautiful an appearance as in the bladder. On cutting into the mesentery, which was well supplied with fat of a good colour, (as the other parts of the body were, and in a greater degree than could have been supposed from the appearance of the subject) several large glands were observed. These were found ; but some of them equalled in size the largest bean. The beginning of the superior mesenteric artery was com-

mon also to the celiac. The coronary artery of the stomach was much larger than natural. The vena cava, though cut through both above and below the liver, did not discharge a single drop of blood.

THORAX. Both sides of the chest contained a small quantity of colourless watery fluid. The lungs were turgid with air, and adhered to the pleura at the back and at the sides. Some poly-pous concretions appeared in the heart; and also in the jugular veins, which contained more blood than the veins below them did. The parietes of the heart were obviously thicker than natural on the left side, and thinner than usual on the right. There was not, however, any dilatation of the ventricles, nor of the pulmonary artery and veins, nor of the aorta. The valves at the mouth of the aorta were somewhat hard. Within the trunk of that vessel, both near the heart and at other places, here and there, spots appeared, marked only by a yellow colour, which were probably the beginnings of future ossifications; for a little above the diaphragm, where they were of a larger size, and more protuberant, they were already indurated. The diameter, however, of that vessel, was in no part enlarged. This was not the case with all its branches; for, besides the coronary artery already mentioned, the left carotid was larger than the right. That vessel was divided into two branches

within an inch and an half of its origin, which is very unusual; and, at its division, was more dilated than arteries generally are, where they send off branches. The same circumstance appeared in the first division of the subclavians.

HEAD. Although the brain was not examined till the twenty-eighth day after death, it not only appeared sound, but also had no bad smell.

CAUSES OF GASTRITIS.

PREDISPOSING CAUSE. It cannot be doubted that some particular state of the stomach predisposes to gastritis; but its nature is so obscure, that any attempt to investigate it would be exceedingly unsatisfactory.

EXCITING CAUSES. Besides the ordinary general exciting causes of inflammation, every acrid substance applied to the stomach, whether in the form of aliment, medicine, or vitiated bile, or mucus, has been known to produce gastritis. Thus, it has been excited by external injuries, exposure to cold, or cold and wet; the recession of cutaneous eruptions, or the suppression of habitual evacuations; by the use of spirituous liquors, excessive indulgence in eating, and draughts of cold water when the body is heated; by swallowing acids

acids and alkalis, or poisonous substances, such as arsenic, &c. and those various purgative medicines which produce their effect principally by stimulating the muscular fibres of the intestines; and by an over-proportion of mucus or bile, or a vitiated state of these secretions. The inflammation is sometimes too communicated from neighbouring parts.

Some of these circumstances occasion gastritis in every different state of the system: such, for example, are certain external injuries, swallowing concentrated acids, or alkalis, or arsenic, &c. But others, as all the general exciting causes of inflammation, the ordinary laxative medicines, over-proportion of mucus, bile, &c. are productive of no such effects, unless some change from the healthy state, either in the stomach or system, or both, have previously taken place. The nature, however, of that change, as has been already mentioned, is still involved in obscurity.

REMARKS ON THE CASES OF GASTRITIS.

THE exciting cause in all these cases is obscure. In the first case, indeed, it probably was an over-proportion of bile in the stomach; which is a frequent consequence of intermittent fever. In the second, the patient had been habituated to in-

tense thought, which is well known to interrupt the functions of the stomach: hence an accumulation of mucus, or some morbid alteration in the food, might have taken place. In both instances some particular circumstance must have predisposed to the disease; for it is not an ordinary effect, either of intermittents or of intense thinking.

The third case is still more obscure than the former. The erosion in the œsophagus, as well as in the stomach, induced MORGAGNI to think that the disease originated from something swallowed.

SECT. VI. *ENTERITIS*; OR, INFLAMMATION OF THE INTESTINES.

INFLAMMATION of the intestines is marked by fixed pain, with tension in some part of the belly, especially about the umbilicus; nausea, vomiting; obstinate constipation, attended with low, quick, hard pulse; great thirst, dry tongue, burning heat, and red-coloured urine.

The pain sometimes invades suddenly, and sometimes is ushered in by shivering, or diarrhœa. Although fixed, it is occasionally much aggravated,
but

but is never entirely alleviated. It is increased upon touching the affected part; and is commonly accompanied by hardness and tension of the abdomen. The nausea and vomiting are more severe in many cases than in others; which has been thought to depend upon the vicinity of the inflamed part to the stomach. Apparent diarrhoea sometimes attends; hiccup often. Sometimes this disease imitates, to a superficial observer, hepatitis and gastritis: but from the former it is distinguished by the absence of the pain on the top of the shoulder, and from the latter by the painful sensation about the umbilicus. In some cases, however, all these diseases are combined. On some occasions, too, the symptoms of inflammation of the intestines are so obscurely marked, that they may be entirely overlooked. MORGAGNI has mentioned, on the authority of Valsalva, that where there is hardness and tension, with a slight degree of pain in the abdomen, attended with low, weak, unequal pulse, and an unusual appearance in the face, from wildness in the eyes, or lividness round the mouth, there is always reason to suspect inflammation of the intestines.

This disease is a very dangerous one, as it sometimes terminates in gangrene within a few hours from its commencement, and often within a day or two. Sometimes, too, it proves fatal during the inflammatory stage. It terminates also by
exudation

exudation into the cavity of the abdomen or of the intestines; by suppuration, and ulceration, and sometimes by resolution.

The symptoms which indicate gangrene having taken place, are, sudden cessation of pain, while the pulse continues quick, small, and unequal, and at the same time the extremities are cold, and the countenance remarkably dejected; the vomiting of fæces, or of the glysters that have been exhibited; and the discharge of black fetid stools.

Fatal event during the inflammatory stage may be dreaded, if, along with suppression of urine, violent hiccup, delirium, and subsultus tendinum, or convulsions, supervene.

Exudation into the abdomen is marked by sudden swelling of the belly, and evident fluctuation in that cavity. When the exudation is into the intestines, it is known by the appearance of the stools:

Suppuration and ulceration are announced by constant vomiting, burning pain, and great swelling of the belly.

If the pains be gradually alleviated; if natural stools be passed; if universal sweat, attended with firm equal pulse, or if a copious discharge of loaded urine, with the same state of the pulse, take place, resolution may be expected.

The seat of the disease is sometimes in the large intestines; more often in the small. Both coats
of

of the intestines are probably affected in real enteritis; for there is reason to believe, that when the internal coat alone is inflamed, the symptoms enumerated do not occur. In some cases, however, the inflammation is communicated from the internal to the external coat, and *vice versa*.

CASES OF ENTERITIS.

CASE I. (XXXV. 2.)

A STUDENT of medicine, fond of solitude, and naturally easily irascible, when, as usual, in perfect health, became, without any apparent exciting cause, except that he knew his father was then at the point of death, and expected every hour to receive intelligence of that event, suddenly affected, about the fourth or fifth hour of the night, with a violent pain in the umbilical region, more excessive sometimes in one part, and sometimes in another, but never leaving a certain space of that region. A physician having been called, prescribed a dose of the electuary called *Philonium Romanum*. This however was thrown up: for he had already begun to vomit porraceous bile, which afterwards became æruginous, and at last, near his death, so black that it approached to the colour of soot. Within about ten hours from the
beginning

beginning of the pain, Valsalva was called. As he found that the patient had an unpromising look, his abdomen being tense and painful to the touch, his pulse being low, constricted as it were, and not sufficiently perceptible, his urine of a red brown colour, and very turbid, and other bad symptoms being present; and recalling to his mind similar cases, he saw that much mischief had been done within a short time, and prognosticated that the patient would die within twenty-four hours. That the patient, however, might not immediately understand this, he ordered him to swallow fresh drawn oil of sweet almonds, and his belly to be anointed with oil of violets combined with camphor; and he desired that two older physicians should be sent for. When these practitioners had considered the case, they were of opinion that the patient was oppressed with convulsions; and therefore advised that blood should be drawn from the feet, and that a large cupping glass should be applied to the abdomen. Valsalva having modestly objected to this practice, the advice of the two older physicians was adopted. A vein was twice opened. From the first wound nothing was discharged: from the second a little blood flowed out; but it immediately lost its force, and came out so slowly and feebly, that although the vein was then instantly stopt, the pulse could no longer be felt. Slight delirium soon after supervened:

vened : his eyes appeared somewhat convulsed ; his respiration became difficult ; and he died during the night, according to the prognosis of Val-salva.

Appearances on Dissection.

EXTERNALLY. When the abdomen was felt with the hand, it was obvious that some fluid was effused within it.

ABDOMEN. Extravasated blood, in a fluid state, to the quantity of a pound and a half, was found in the belly. A strong smell, though not excessively strong, issued from that cavity. The intestines were to a great extent, and especially those in the upper part, red in several places ; and the ileum had already begun to grow livid. The peritoneum in some places, but more particularly where it invested the diaphragm, was marked with black spots. Where, however, it covered the external surface of the stomach, which organ internally was in a natural state, it was unequal from black tubercles rather than spots. These tubercles, although at first they appeared to be glands, were in fact nothing else but stagnant blood ; or rather, they proceeded from an incipient gangrene.

THORAX. Some blood appeared effused into the bronchia.

C A S E II. (XXXV. 12.)

A POOR blind old woman, of a small and slender make, having been indisposed for three days, was brought into the hospital of Padua, affected, it was supposed, with inflammation of the thorax. Nothing certain could be learned from herself; for her strength was so much exhausted, and her pulse so very weak and small, that she died the very day she was brought in.

Appearances on Dissection.

ABDOMEN. The intestines were inflamed; as was also the liver. The internal surface of the uterus, probably from the same cause, was as red as if the woman had lately had the catamenia. The anterior and posterior internal surface of the cervix joined at an angle on the right side; and from that part a small membrane, though not very minute, was extended transversely to the posterior surface, adhering to it by its whole lower edge. The rest of it was loose and floating; and it lay in such a manner, that, contrary to the common appearance of the *valvulæ cervicis*, its concave surface was turned upwards, and not downwards. It was therefore probable that this membrane had not existed originally, but had been produced, perhaps, in consequence of difficult parturition; it was certain that the woman
had

had born children. The uterus inclined to the right side.

THORAX. The lungs were found. The pericardium was every where connected to the heart, by a continued, but not very strong, cohesion; for the two could be easily separated by the fingers, without any laceration whatever. It did not adhere to the large vessels. On the surface, by which it had adhered to the heart, a white spot appeared only in one part, and occupying a small space. The ventricles of the heart contained blood of a black colour, as it was every where else in the body; but no polypous concretions. Concretions of that kind, however, were found in several vessels. Some of them were round and white; and some of them were thick, firm, and even long, as those were which extended from the right auricle to the internal jugular veins.

HEAD. In one of the eyes no morbid appearance occurred, except opacity of the cornea. In the other, although several parts were well formed, the chrystaline lens appeared so much diminished that very little of it remained. What did remain was white and opaque, yet internally moist. It, together with the iris, adhered to the cornea, where that coat was more opaque than natural, and somewhat excavated into a small pit of an oval shape, and was tinged of a dirty yellow colour.

colour. This disease, however, did not extend to the external surface of the cornea.

C A S E III. (xxxv. 14.)

A YOUNG man, addicted to the use of wine and spirituous liquors, who had lately laboured under intermittent fever, became affected with a pain in the belly, which was removed by the discharge of wind downwards. The pain however returned within a few days; and he was brought into the hospital of Bologna, on the sixth day after the return. The pain continued constantly in the hypogastric region. It was slight, and only from time to time became violent. At these times, the belly often swelled considerably in that part; and when it was examined with the hand, several hard globules were felt. All these symptoms quickly disappeared, and again recurred at intervals. The stomach was painful; and he vomited every thing received into it, not excepting the medicines, among which even was opium. As his belly could not be kept open, but by means of glysters, it was determined that, while that circumstance should be held in view, both remedies and nourishment, consisting of broth and emolient herbs, should be given by way of glyster. This treatment, however, produced no alleviation of pain: besides, no stool could be procured until an injection of linseed

feed oil had been more than once exhibited. The belly was anointed with the same oil, and with other substances, without any good effect. He felt the pain easier, when sitting up in bed than when lying: therefore, he sat up even when he slept. He felt himself better too, and slept more easily, with an empty stomach, than when he had, by chance retained any thing in it. This circumstance, and also the absence of some other symptoms which generally mark the presence of worms in the alimentary canal, rendered it probable that his pain did not proceed from that cause, although he had, three days before this, vomited up a large lumbricus. At last he began to retain some nourishment, and even no longer to vomit his dinner. His cheeks were red, which he himself attributed to a determination of blood to the face, to which he said he was subject. He was thirsty; and his whole abdomen was distended. It was now the fifth day since his admission into the hospital; and in the morning of that day he said he was somewhat better; a circumstance which was confirmed by the appearance of his countenance, the tone of his voice, increased strength of his body, as appeared from the manner he sat, and the state of his pulse, which neither was then, nor hitherto had been bad. At that time he had no fever; nor had any feverish symptom, except perhaps on one occasion, been observed during his residence in the hospital.

hospital. Within two hours, however, notwithstanding these favourable appearances, he began suddenly to cry out from the severity of pain, and he continued to do so for fifteen hours. In the mean time, he had vomiting; and towards the evening, he himself gave notice that his pulse could no longer be felt, which was really found to be the case. At the end of fifteen hours from the commencement of this attack, he said that he must get out of bed to go to stool. While at stool he fainted; and within half an hour died.

Appearances on Dissection.

When the body was washed the day after death, a great quantity of fluid, like putrid blood, diluted with a very stinking tobacco-coloured liquid matter like fæces, was discharged from the mouth. The abdomen, in consequence of this, became somewhat flaccid about the hypogastric region: and although in the epigastric region, which was of a livid colour, and in the remaining parts, it was still hard and distended, it was less so than before death.

ABDOMEN. Whenever the cavity of the belly was opened, a great quantity of fluid, like that discharged from the mouth, burst out so suddenly, that it was uncertain whether it had proceeded from the cavity of the belly, into which it had been previously effused, or from a distended intestine, which might have been readily cut through
along

along with the peritoneum. At any rate the cavity of the belly appeared full of that fluid. All the small intestines were as black as coal. The spleen also was similarly affected with gangrene, at least in part. The stomach, however, and that portion of the large intestines extending from the extremity of the ileum to the left hypochondrium, were found, as far as could be judged from external examination; for the intolerable stench, which was increased by the fæces having passed through a wound made by carelessness in one of the intestines, prevented any more accurate examination. Along with the fæces a lumbricus worm, of a moderate size, was discharged through the wounded intestine.

C A S E IV. (xxxiv. 25.)

AN old man, aged seventy-four, of a lean habit of body, addicted to drinking, had begun for a month to walk in such a manner as to bear chiefly on his left leg. His servants remarked this circumstance more than himself; and indeed he never spoke on the subject, nor appeared to feel pain in any part. Within eighteen days after, he was seized with a wandering pain in the belly, unattended with fever; which he himself, without any advice, expelled, by means of theriac. But within the space of twelve days after, he became affected at mid-day

day with excruciating pain, exciting the sensation, as he expressed it, as if he were bitten by dogs, at the superior part of the iliac region, on the right side. The pained part was swelled, but was not discoloured. When touched superficially, it felt soft; but when the hand was forced more deeply into it, a hardness was perceived. His pulse was frequent, and quick in the contraction of the artery; but in other respects good. His eyes appeared much sunk; his tongue was parched; and he passed a restless night. On the succeeding day his pulse was more full, and was vibrating. The pain and swelling extended to the middle of the belly, and at last to the left side also. Seven ounces of blood were drawn from the right arm. The blood contained no serum, and exhibited a thick yellow crust. He had nausea; but not to such a degree as to vomit his food. His belly was kept open without any trouble. After having passed a very bad night, his pulse, on the third day, was low; he had frequent bitter and sour eructations; his voice was impaired, as if from convulsion; and his mind from time to time wandered, as the nonsense which he spoke fully indicated. On the fourth day, his extremities were now and then convulsed; and his whole body remained rigid for a quarter of an hour. At that time no pulse could be felt; but whenever the convulsion ceased, the pulse returned, and was

like that of a healthy person, except that it was low, and when pressed upon by the fingers afforded no resistance. Soon after, his respiration became very difficult; and although his tongue was moist, and the delirium had ceased, he vomited feculent matter; and in the evening of the same day he died convulsed.

Appearances on Dissection.

ABDOMEN. The left lobe of the liver appeared flabby, and throughout gangrenous. The stomach and intestines, especially the small ones, were in some places red, in some livid, and in others black. The beginning of the colon, at that part where it was in contact with the muscles that cover the fossa iliaca, and also these muscles themselves, were compleatly gangrenous. It was so strongly connected with these muscles, that it could not be separated from them without laceration. A livid-coloured serous fluid, mixed with pus, which had been found in the cavity of the abdomen, seemed to have been effused from that part of the intestinal canal, as the intestines contained a similar fluid.

C A S E V. (XXXIV. 27.)

A WOMAN, who had had a fall on her back about a year before, became affected with violent deep-seated pain in her belly, attended with vomiting.

miting. This having continued for some days, she died.

Appearances on Dissection.

ABDOMEN. The stomach was found wonderfully contracted. The caput cæcum coli was so much distended with semi-fluid yellow fæces, that it equalled the usual size of the stomach. That intestine was affected with inflammation; which had also begun to extend over the neighbouring viscera.

C A S E VI. (XXXV. 10.)

A RUNNING footman, upwards of sixty years of age, of a short stature, and fat habit of body, having been no longer able to act as a servant, had begged for some years, and had drank very freely whenever he could procure wine. On his return home one day, he complained of being unwell; but he took nothing by way of remedy, except bread and wine. Immediately after this, he complained of pain in his belly; which continued till mid-night, when he died.

Appearances on Dissection.

ABDOMEN. When the abdominal muscles, which were flaccid, were cut through, and the cavity opened, a strong smell was felt. A considerable portion of the small intestines descended pretty low into the cavity of the pelvis, so as to reach

reach the junction of the urinary bladder and rectum, and filled up the whole space therein contained. This, however, had been an original conformation, or at least not a recent one. That portion, and other parts of the small intestines, were in some places much contracted, and were there of a brown colour; but elsewhere they were red, the most minute vascular ramifications being as much distended with stagnant blood as if they had been injected with red wax. The large intestines were in the same state here and there, especially about the beginning of the colon. The edge of the liver was somewhat black. The spleen was larger than natural. The trunk of the aorta, within the belly, exhibited some small points of ossification. The vena cava was distended with much black fluid blood.

C A S E VII. (xxxv. 16.)

A SLENDER woman aged forty years, of a short stature, and of a bilious temperament, having after a fit of passion become affected with pain in her side, was admitted into the hospital of Bologna. She had been a widow for three years; and had had no appearance of the menses for eight years. A spitting of blood, to which she had been subject from time to time, was imputed to this cause; though it appeared to the physician who attend-

ed her, to proceed from the pharynx rather than from the lungs. Pain, which resembled that of the cutting of knives, was felt first below the left breast, and then, without leaving that situation, it extended to below the right breast; but there it was more slight, so that she could lie upon that side. The pain was aggravated when the part affected was touched; and it rendered her respiration difficult. It had been ushered in by febrile rigour, which, although the fever did not intermit, recurred every day. Her face was flushed. She had great thirst; and she suffered much from a cough, as it aggravated the pain. Her expectoration was frequently bloody; at other times white, thick, and frothy. She was sometimes affected with the sensation of something rising up to her throat. At last she felt a pain about the umbilicus, as if she were torn by dogs. The belly was open. Blood was drawn from her foot; and other means deemed useful were employed. Within a few days after this, without any previous critical evacuation, all the symptoms were so much alleviated, that the physician pronounced her to be convalescent. She arose; but her strength having immediately failed, she was obliged to return immediately to bed, where she was found, with her limbs drawn up, and her body bent, in the position generally taken by those affected with the sensation of cold, and without any pulse. When she

she was asked, whether she felt any pain in the thorax or abdomen, she replied in the negative. On the same day, she began to pass fetid blood by stool. She afterwards grew delirious, and had subsultus tendinum. In consequence of these circumstances, she became much weakened, so that she could no longer speak; and, on the sixteenth day from the beginning of the disease, she died.

Appearances on Dissection.

ABDOMEN. When the belly, which had become flat, was cut into, and the cavity laid open, a smell, such as generally proceeds from gangrenous parts, with a combination of that kind of acid smell felt where there are lumbrici, was emitted. Almost all the small intestines were of a red, approaching to a livid and black, colour; and in them some lumbrici were found. The same livid colour appeared at the lower part of the flat surface of the spleen, and penetrated pretty deeply into its substance. The pancreas had become thickened, and consisted of a kind of indurated globules. The liver was also somewhat hardened. The gall-bladder was distended with calculi, to the amount of an hundred and twenty, together with some pale coloured bile. The largest of these calculi, which were twenty in number, equalled a filbert. All the calculi had a pretty firm smooth surface. They were of various sizes and shapes; but they all, as is generally the case, approached

approached nearly to the form of a cube. One of them being applied to a burning candle, at first swelled and bubbled up, emitting no bad smell; and then took fire. It preserved the flame, melting into drops, and from time to time, while burning, sparkled with a smart noise, and retained flame to the very last; so that the flame proceeding from it was more durable and more bright than that of burning sealing wax. Others were burnt in the same manner, and exhibited the same phenomena. The uterus inclined so much to the right side, in consequence of the round ligament on that side being very short, that, looking at the middle of the pelvis, no uterus was seen. A pustule, of the size of a lupin, filled with white purulent matter, projected from the uterus, at the insertion of the left Fallopian tube. When the pustule was opened, and the matter discharged, the substance of the uterus which it hollowed out appeared black. The Fallopian tubes contained matter which was not white, but of a yellow fleshy colour. The ovaria were contracted: within them there were a few vesicles; and the coat of one of them was in some measure cartilaginous.

THORAX. The lungs, on their anterior surface, were connected to the pleura in a very few places by membranous substances. They were found; except the anterior part of the right lobe, the substance of which was compact, but not in a very

ry

ry great degree. The pericardium contained no serum. The heart was flabby. In the right ventricle, and at the orifices of all the vessels, small polypous concretions were seen. The posterior part of the pharynx, opposite to the epiglottis, was very much eroded: and the velum pendulum palati also at one part appeared black, rotten, and entirely perforated.

HEAD. When the head was separated from the neck, a considerable quantity of watery fluid flowed out from the great foramen of the os occipitis. On opening the head, a similar fluid was found under the pia mater, especially on the left side. The lateral ventricles contained reddish serum. The choroid plexuses were rendered unequal by a number of hydatids, which readily burst on being touched. When the medullary substance was cut into, bloody points appeared: and when it was pressed, a greater quantity of blood than usual was squeezed out. The same smell of worms which was felt in the belly, was perceived also in the dissection of the brain, in the tongue, in the pharynx, and even in the very eyes.

CASE VIII. (XXXIV. 23.)

A MAN, aged fifty years, of a lean habit of body, and pale colour, having drank a great deal of wine along with some fellow-drunkards, was
feized

feized with violent, but wandering pain, in the belly, attended with flatus, vomiting of bilious matter, and a quick pulse. On the morning of the succeeding day, as the pain was not only more severe, but also fixed in one part, which was very sore to the touch, Valsalva being afraid of inflammation, ordered a vein to be opened. All remedies, however, were in vain: for he died about the beginning of the fourth day after the attack.

He had been two years before affected with acute fever, from which he had recovered without any evident crisis. Soon after this, he complained of much thirst; he felt a very great weakness in the head and stomach; and his strength became impaired. Along with these symptoms he was sometimes distressed with considerable oppression, which at night when he wished to go to sleep, was succeeded by tremor of the whole body. It was imagined by some that the man laboured under phthisis pulmonalis. But Valsalva thought that his complaints proceeded from a quantity of water in the cranium; and on that account, he prescribed those medicines which are proper for dropical patients.

Appearances on Dissection.

ABDOMEN. A large portion of the ileum was inflamed. All the other viscera were sound.

THORAX. A very large polypous concretion appeared

appeared in the right ventricle of the heart, from whence it extended into the vena cava.

HEAD. A considerable quantity of serous fluid was found within the cranium; and the ventricles were full of the same kind of fluid. The glands of the choroid plexuses were very large, and contained much serum. The corpus callosum, and the other parts which joined the two hemispheres of the brain, were flabby.

CASE IX. (XXXI. 25.)

A WOMAN died in consequence of dysentery.

Appearances on Dissection.

ABDOMEN. The intestines were found in a state of inflammation. The right kidney was wanting; but the deficiency was supplied by the left, which was twice the ordinary size, and contained a double pelvis, and double ureter. Both ureters went to the right side of the bladder.

CASE X. (XXIV. 16.)

AN old man, of a lean habit of body, was brought into the hospital of Padua, on account of strangulated hernia. His pulse was small and weak, but not intermitting; yet notwithstanding every means which could be employed, he died.

Appearances on Dissection.

ABDOMEN. The intestines were inflamed. The testis next the hernia was considerably less than the other. When cut into, its substance internally appeared of a brown red colour; but that of the other was natural. Between the sound testicle and the tunica vaginalis, there was a little quantity of watery fluid; and at one extremity of the same testicle, a small roundish body, like the remains of a ruptured hydatid, projected. The gall-bladder was placed transversely; and although it was of the ordinary size, it was not received as usual into a depression of the liver; for after its fundus was separated from the liver, (and this was done without the least force being necessary) the part to which it had adhered could scarcely be distinguished, being so smooth, that if any vessel had connected them, it must have been so exceedingly minute as to escape the notice of the senses. This was certainly an original conformation. It contained a little quantity of black, and somewhat viscid bile, together with twenty calculi. These were of a black colour; small, but nearly equal to each other in size. They all consisted of several globules as it were; and being indented into each other, they were all in contact. When applied to a burning candle, they neither melted nor flamed, and scarcely even sparkled. All the other abdominal viscera were found:

THORAX.

THORAX. The left coronary artery appeared changed into a bony canal, to the extent of several fingers breadth, where it surrounded the basis of the heart. A part of that long branch which is sent down from it, along the anterior surface of the heart, to the extent of three fingers breadth, was also ossified. From this circumstance, the blood was transmitted on both sides, not through a membranous canal, nor through a vessel which had here and there points of ossification, but through a continued bony tube, in a few places only softer than in others; and these formed transverse lines which might be compared to the joints of a small reed. When the heart was opened, and some polypous concretions were removed, the tubercles of the valves of the aorta appeared much harder than usual, and almost osseous. No points of ossification, however, were found in any of the valves, nor in the aorta near the heart. But the internal surface of that vessel, at some distance from the heart, both at the origin of the vessels going to the head and superior extremities, and also from that part quite to the division into the iliacs, was in many places unequal, from very hard bony scales; several of which equalled in size the nail of the thumb: The internal coat of the artery, however, which covered all these scales, seemed injured only in one

place, where there was an aperture, in which a thickish white matter was observed. Bony scales were also discovered at the origin of the subclavian and carotid arteries on the right side, and also in the iliacs, and in the splenic as far as its insertion into the spleen. No ossifications, however, were observed in the arteries within the head, nor in the superior extremities; those in the latter were harder and somewhat wider than usual. The blood which remained in the crural arteries was not fluid, nor yet was it polypous.

HEAD. Polypous concretions, of a pretty considerable thickness, were found in the lateral sinuses of the dura mater. In the right and left ventricles of the brain there was some serous fluid. On the choroid plexuses of both these ventricles, hydatids appeared, some of which were pretty large.

C A S E XI. (xxxiv. 5.)

A MAN, aged forty years, of a sanguineo-bilious temperament, who was sometimes troubled with a slight hernia at the groin, became affected after eating artichokes with ileus. A slight tumor appeared at the groin: but he denied that he felt any pain there; and complained only of pain in the belly, which was very much indurated from the retention of the fæces. All the remedies that
were

were tried proved in vain ; for on the seventh day fatal vomiting supervened.

Appearances on Dissection.

ABDOMEN. The intestines appeared turgid with air ; and at that part near the cæcum where they are doubled, they were livid and black ; and, together with the annexed portion of the mesentery, which appeared fleshy as it were, had fallen down to the extent of four fingers breadth into a hernial sac, with so narrow an orifice, that, after they had been distended with the matter contained in them, they could not have returned into the abdomen. This sac was in the right groin : and was formed by an elongated and dilated portion of the peritoneum ; but not, as was formerly imagined, by that portion of it which accompanies the vas deferens and spermatic vessels ; for it lay on the anterior part of that process and of those vessels, which were very much distended with blood. It was internally of a black colour, or rather of a black green, as if it had been stained by vitriol, as a strangulated portion of the intestine generally is. In the left groin there was another sac very much like that just described, except that the membrane of which it was formed was in every respect natural.

THORAX. Polypous concretions of a yellow colour, along with coagulated blood, were found within the ventricles of the heart. That in the

right was larger than that in the left; but neither extended beyond the ventricles.

C A S E XII. (XXXIV. 9.)

A YOUNG man, a ploughman, who had been seven years before troubled with a hernia on the right side of the scrotum, having had the prolapsed intestine replaced, and retained by means of a truss, suffered no inconvenience from it, until he had laid aside the use of the bandage, when, after having been affected with intermittent fever for two months, and having stuffed himself with dumplings and other indigestible preparations of unleavened flour, the intestine again fell down as formerly. On that very day he began to have vomitings of bitter matter. To these, singultus and pain of the scrotum supervened, on the fourth day of the disease. The scrotum having been fomented with warm soap leys, the pain in it seemed alleviated. But as the vomiting and singultus continued, and as he was besides affected with pains in his belly, together with thirst, he was brought on the sixth day into the hospital of Bologna. The *emplastrum de crusta panis* having been applied to the region of the stomach, and an enema composed of linseed oil and of oil of violets, having been exhibited, the singultus, and vomiting also, abated, though for a short time only.

On

On the seventh day the pain in the scrotum was diminished. His pulse was less frequent than it had been on the preceding day, but was weaker than it should have been in a young man; his thirst continued; and he passed no fæces until the oily injection already mentioned had been exhibited. On this day, injections, composed of the Carminative Decoction, as it is called, to which clarified honey, together with two drachms of electuary, called *Benedicta Laxativa*, were added, having been administered, the vomiting of bitter matter returned, and at the same time a worm of the lumbricus kind was thrown up. The injection was not entirely passed even after many hours had elapsed. On the eighth day another lumbricus was vomited. The abdomen, although it was tense, which it had been the day before, and although it resounded under the hand as if there were tympanites, was not painful to the touch, even though rudely handled; except, indeed, in the epigastrium, where he felt a kind of gnawing pain. When he was asked if he also felt heat in that part, he replied in the negative. His pulse was nearly in the same state as on the day before, except that it was much more frequent. His tongue was parched. His urine was of a deep colour. Under his eyes there was a livid mark; and, independent of that, his face had an unfavourable appearance. He passed a restless night; and

and on the ninth day was much in the same state, though, indeed, his pulse, and the appearance of his countenance, were rather worse; for his pulse was somewhat quicker, and the artery when pressed afforded little or no resistance, and his face had nearly that appearance styled Hypocratic. Although on the preceding days he had had considerable anxiety, and spoke in a desponding tone of voice, and frequently changed the posture of his limbs; on this day all these circumstances appeared more remarkably. Moreover, besides the constant pain over his whole belly, he felt at intervals, in different parts of the abdomen, but especially in the epigastrium, gnawing sensations. He was asked if he had any throbbing pain in his belly, or if he felt throbbing in any part of his body; and he answered in the negative. The pain which he felt in the scrotum and contiguous part of the belly, was not, on these latter days, according to his estimation, the chief pain. His skin was dry and rough; but not unusually warm. After having taken some food, he felt better. He said that he had been relieved the day before by the oily injection, which indeed he had mentioned at that time. On this day he had another injection, consisting of broth in which coriander seeds had been boiled, and into which sugar had been put. When he passed this, he vomited the food he had taken. Towards the evening he had
some

some sleep. After this, he complained of a kind of throbbing sensation in the epigastrium, and of some sense of heat in the belly. In the mean time, he vomited at intervals a yellow-coloured matter, more liquid than that hitherto thrown up. All these symptoms having continued during the whole night; on the morning, which was the tenth day from the beginning of the disease, he died.

Appearances on Dissection.

ABDOMEN. A great quantity of the same kind of matter as that vomited, was found extravasated in the cavity of the abdomen; and the stomach and small intestines, even as far as the hernia, were greatly distended with the same kind of matter. Within all that tract of the intestines, a single lumbricus only, like those formerly vomited, was discovered. The large intestines, which were empty, and of a white colour, were found. The stomach was also found. The duodenum, however, to the extent of six fingers breadth, had become so livid from inflammation, that it had a gangrenous smell. The jejunum, and by much the greatest part of the ileum, were here and there affected with a slighter degree of inflammation, as they were not livid. The remaining part of the ileum, namely, that, which lay nearest the colon, was rather gangrenous than inflamed. The hernial sac was of the shape of a pear; and was composed of a coat, which was not less thick and firm than

that of the pulmonary artery. It was covered not only by the scrotum and dartos, but also by the cremaster muscle, and the membrane on which that muscle in common with the testis lies; and also by the vessels belonging to the testis. The testis lay under the sac; and its vessels, which adhered externally to the inside of the sac, passed into the belly near its orifice, but not through it. That orifice was like a pretty thick ring, which had been formed by the peritoneum and surrounding tendon. Besides the ileum, and part of the mesentery attached to it, it contained also the omentum, almost no part of which had been seen covering the intestines on the left side, as it had been drawn down on the right side into the hernia. It not only extended to the bottom of the sac; but from thence forming itself into a round body, (which, unless it had been cut into, could never have been known to have been composed of the compressed substance of the omentum), it returned upwards, and was connected to the strangulated ileum, at no great distance from the orifice of the sac. That portion of the omentum, thus prolapsed, was here and there connected to the sac, by certain interposed red flabby substances, which could be easily separated both from the sac and omentum; and appeared to be nothing else than membranous cells filled with blood and serum. The ileum neither was connected

ned to the sac, nor did it extend to its fundus ; but being reflected a little below the orifice, it returned into the belly by the same passage by which it had come out : so that not more than four or five fingers breadth of the intestine was strangulated. All that portion being affected with gangrene, was of a black colour ; and that part constricted by the orifice of the sac was much more black and gangrenous ; as was also the ring forming the orifice of the contiguous part of the ileum, lying above it, which was so rotten as to have been incapable of bearing the weight of the fluid that had distended it : for the fluid had escaped through a pretty large opening into the cavity of the belly. The edge of the liver was black ; and its concave surface, together with the gall-bladder, which was small, were of a blackish colour. All the contents of the belly were not a little warm, although the body was not opened till thirteen hours after death.

THORAX. A soft yellow polypous concretion was found in the right ventricle of the heart, from whence it sent out white-coloured branches even as far as the jugular veins.

CASE XIII. (xxxiv. 14.)

A WOMAN, above fifty years of age, who had, for thirty-two years been affected with two herniæ,

both on the left side, the one at the umbilicus, and the other at the pubis, having accidentally fallen, received a contusion about the top of one of the scapulæ and the extremity of the shoulder bone. Although she readily recovered from this bruise, she began in a few days after the fall to be costive, and soon after to vomit a yellow fluid matter of the same smell as fæces. The vomiting, although it occurred at other times, took place chiefly about two or three hours after having taken food. Her pulse was neither frequent, nor did it afford very little resistance when the artery was pressed; but it was exceedingly small, particularly after vomiting; and it became smaller every day. As glysters produced no effect, mercury, to the extent of two drachms, was twice given. The first dose proved of no use; but by means of the second she had three stools, the two first of which consisted of indurated fæces, and the latter of fluid feculent matter. The medicine seemed to have no bad effect. Nevertheless, about twelve hours after having taken the second dose of mercury, that is, within four or five days after the vomiting had begun, having half an hour before had a return of the vomiting, she died. During the whole course of the disease, she had neither been affected with obvious fever, nor with convulsions, nor had she complained much of pain in the belly.

Appearances

Appearances on Dissection.

ABDOMEN. When the belly was opened, a strong smell was perceived. The jejunum and contiguous part of the ileum were quite distended with the same matter which had been vomited. The remaining part of the ileum, and the large intestines, were contracted. The jejunum, in some places, was marked longitudinally with streaks of a bright red colour; in other places it was of a red brown colour, as the ileum was almost every where. That latter intestine, not far from the jejunum, to the extent of three or four inches, formed into an arch, together with the annexed mesentery, had fallen down into the sac of the lower hernia. Although it neither adhered to the sac, nor was compressed by its orifice, which formed a kind of ring, it had become gangrenous. It was of a black bloody colour; and bloody serum distilled from its surface. The upper hernia, when looked at externally, seemed divided into two little eminences. Internally, it was found to consist of one sac only, formed by the peritoneum, into which nothing more than a portion of the omentum had entered. The liver was somewhat harder than usual. The spleen was flabby, and externally appeared in some places livid. The ligaments of the uterus were black; that organ itself was very small, and had thin parietes. On cutting into it, the substance of the parietes in the middle was so livid, that it appeared

appeared approaching to the state of gangrene. As the uterus was situated a little lower than usual, the state of the vagina was examined, in order to ascertain how far the uterus had fallen down. When the labia were separated, and the orificium vaginæ brought into view, a body was seen within it, which at first might have been taken for the os tincæ. But as the uterus had not appeared placed so low as to reach that part, even although it had been very large, the vagina was immediately taken out of the body, that the diseased appearance might be more accurately examined. It was then found, that the glandular body of the urethra, called the Prostate, had become very thick, and had drawn down the vagina, which was flaccid and destitute of rugæ, so low, that its extremity, where perforated by the orificium urethræ, might have been readily mistaken, by an unskillful person, for the os tincæ.

CASE XIV. (XXXIV. 15.)

A WOMAN, aged thirty-nine years, of a pretty good habit of body, having not a bad colour, and much less a jaundiced appearance, the mother of several living children, was subject to a small femoral hernia, which she was accustomed to replace herself whenever it became troublesome. She had nursed a child for six months, when she
had

had a fit of the hernia, from which she could not relieve herself as formerly. After having for several days attempted to reduce the prolapsed intestine, she became affected with fever, vomiting, and the other symptoms which attend strangulated hernia, except that she could always pass some little by stool. She was brought into the hospital of Padua, though too late, as she looked like one just at the point of death. Nevertheless she dragged out her existence for several days, on the last of which she even seemed to be better, and to be relieved, by the glysters which were exhibited. On that day, however, she died.

Appearances on Dissection.

ABDOMEN. The hernial sac, which was thick, and made up of many laminæ, easily separable from each other, being brought into view, was found to be entirely unconnected with the round ligament of the uterus, but to be attached to the crural vessels, on the inside of which it lay. Its orifice was not narrow; and therefore the compression of the prolapsed intestine proceeded from the lower edge of the external oblique muscle, called Poupart's ligament, that lay over it. Under this ligament some part of the colon was prolapsed. The intestine, however, remained sufficiently open, except at the orifice of the sac, where it was rendered impervious. At that part it was in contact with the sac, and was black and putrid.

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The contiguous portion of the intestine without the sac was green. The parietes of the abdomen, internally, were also of a green colour, and had a strong smell in most places. The gall-bladder was somewhat larger than natural; and contained, along with some bile of a black colour, sixteen calculi. All these were small, though not very much so; and were nearly equal in size to each other. Externally they were yellow, and they had several smooth surfaces. One of these calculi, in its wet state, being applied to a lighted candle, burnt with sparkling, and melted, but did not preserve the flame.

THORAX. The whole left lobe of the lungs was connected to the pleura on one side, and to the mediastinum on the other. The thyroid gland was larger than natural. At the orifice of the pulmonary artery, instead of three valves, four were seen. They were all of the natural appearance, except one which was larger in every dimension.

HEAD. A great many bloody points appeared in the medullary substance of the brain, in consequence of a large quantity of blood being accumulated within the cranium, as was evident from the distended state of both venæ cavæ, and of the veins running into them, especially the vena azygos.

C A S E XV. (XXXIV. 18.)

A PORTER, so much worn out by constant working, that although he was only fifty years of age he appeared much older, had a hernia in the right groin, of the size of one's thumb, which sometimes seemed to disappear. Without any previous cause, except perhaps that a storm of snow had suddenly occurred after mild weather, he became affected with a wandering, but acute pain, in the belly; as if, to use his own expression, he were torn by dogs. By the application of some kind of ointment to the abdomen, the pain seemed to remit; but it soon began afresh, and was never afterwards alleviated. On this account he was brought, on the sixth day of the disease, into the hospital of Bologna. At that time his skin was not hot, nor was his pulse very frequent; but it was small, and when the artery was pressed with the fingers, it gave little resistance, and its pulsations were found to be of unequal force. His whole abdomen was as tense as a drum; more especially below the right hypochondrium, where some cells of the colon could, it was thought, be felt by the hand, a pretty hard hernia being there formed, although he denied that the principal seat of the pain was in that part. He vomited his food. For four days he had had

no stool; and had not even been able to expel wind from the intestines, though he made many efforts for that purpose. Fresh drawn oil of almonds was given him, and a glyster consisting of ten ounces of linseed-oil was exhibited. The latter was passed in the same state as it had been injected; the former was thrown up, and he complained that he had been much distressed thereby. When asked what kind of taste he felt in his mouth, he replied, that of poison. He had great thirst; and the vomiting continued. On each of the two following days, which were the seventh and eighth, a glyster was exhibited; that on the former day was composed of Laxativa Benedicta; and that on the latter, of milk and the yolk of an egg: but they produced no more effect than the former. No fæces being passed; the other symptoms having continued; the pulse, although after the sixth day it had been no longer irregular, having become weaker, and smaller, so that it could scarcely be felt; the skin being shrivelled, the body cold, and he being no longer able to raise his eye-lids, and scarcely to speak, except to ask for wine, he gradually sunk; and on the evening of the ninth day, died in a placid manner.

Appearances on Dissection.

EXTERNALLY. The body had a filthy appearance;

ance; and the skin, which was rigid, was not free from a scabby eruption.

ABDOMEN. When the belly was opened, a gangrenous smell issued forth. The omentum, as far as it extended into the hernia, was of a red colour from inflammation, except in a few broad transverse lines. The spleen in some part was of a morbid livid colour, which penetrated its substance, though to no great depth. The stomach extended much more to the right side than usual; being completely distended with a yellow matter resembling nothing more than fluid fæces; and the small intestines, as far as the hernia, were also distended with the same fluid. Whatever commonly passes from the ileum to the large intestines had remained in it, and that was in very considerable quantity. All the large intestines were contracted, and were of a white colour; by which it was evident that there had been no passage through the prolapsed portion of the ileum; although the tube of the intestine itself had not entered the hernial sac, but having passed by the side of it, only sent into it a portion of its paries stretched into the form of a semi-oval cavity. The one axis of this cavity, where it began gradually from the intestine, measured about three fingers breadth, and was in the longitudinal direction of the intestine; and the other, extending between the anterior surface, at the distance of less than an inch

from the insertion of the mesentery, and the inferior surface, was much shorter. From its beginning, this cavity was contracted more and more, as its semi-oval figure required, until at the middle, where it measured one inch in depth. This part, whether it be called a cavity or a cell of the intestine, was the only portion of the intestinal canal interrupted by the hernia, into which also the extremity of the omentum was prolapsed. Neither of these parts could be drawn back from the hernial sac, because they were not only shut in by the tendinous orifice of the sac, but were also tied down to the sac itself, by bands, which although not very strong, were very numerous. The sac on its internal surface was smooth, except at the part connected with the hernia, where it was somewhat rough. It was formed by the peritoneum, stretched outwards near the outside of the spermatic vessels. On each side of the hernia there was a swelled inguinal gland; one of which was nearer the sac than the other, and seemed composed in part of a white substance. That part of the intestine next the sac, and still more that in contact with it, was of a black red colour. The intestine above the sac, (for below, as mentioned, it was white,) was to a considerable extent of a red colour, approaching to livid; and from that, as far as the stomach, it was evidently red from the sanguiferous vessels being in many places

places much distended. The mesentery was of the same colour.

THORAX. The lungs adhered everywhere to the pleura, (excepting the right lobe at the anterior surface) but more especially at the sides and at the back, where that membrane was thicker than natural. The right lobe, at the upper part, where it adhered very strongly to the pleura, was exceedingly hard, as if from an old disease; and its lower part was also not a little firmer than natural. The lungs were almost everywhere full of fluid. In the pericardium there was no serum. The heart was flabby; and at each of its orifices, as well as in the right ventricle and left auricle, it contained small tender polypous concretions. The smallest of these was that in the left auricle; and the largest that in the pulmonary artery, extending from thence into its ramifications.

C A S E XVI. (XLIII. 27.)

A MAN affected with all the symptoms of strangulated hernia, was brought into the hospital of Bologna. The disease having been too far advanced to yield to any treatment, he died.

Appearances on Dissection.

ABDOMEN. The hernial sac, included within the cremaster muscle and tunica vaginalis, lay behind the spermatic vessels and testicle. Within
the

the sac there was a double portion of the ileum connected to it; but so slightly, that it could be readily separated by the fingers. This prolapsed portion could not be returned into the abdomen, on account of the straitness of the ring through which it had passed, and the quantity of matter with which it was distended. The ring and the intestine within the sac, as also the contiguous portion within the abdomen, to the extent of half an ell, were of a black colour. The rest of the intestines were not turgid, although before death the belly had been somewhat swelled. Within the tunica vaginalis of the testis, on the side opposite to that containing the hernia, there was about a third of a table-spoonful of watery fluid. From the tunica albuginea, which in other respects was, as well as the testicle itself, in a sound state, a small roundish body projected. This was of the same colour, and seemed composed of the same substance, with the coat itself.

HEAD. Serous fluid was found effused within the cranium. The vessels of the dura and pia mater were much distended with blood.

CASE XVII. (XXXIV. 21.)

A MAN, aged fifty years, of a lean habit of body, after having undergone much fatigue in hunting,

ing,

ing, began to complain of the sensation of great heat in the throat and breast. This sensation having ceased in these parts, was transferred to the belly and loins; and being there accompanied with an acute pricking pain, rendered the patient so uneasy, that he could not bear the affected parts to be touched. During the first days of the disease he had frequent rigors. Within five or six days before death, symptoms of volvulus supervened, attended with vomiting of the fæces; by which his strength being gradually impaired, he died on the thirtieth day after having been confined to bed.

Appearances on Dissection.

ABDOMEN. The belly was found almost completely filled with sanious fluid, which had connected the omentum and intestines to one another. The intestines were much inflamed; as were also the liver and spleen; which latter was more deeply inflamed than the liver. The left kidney contained under its proper membrane some extravasated blood; this did not however extend over the whole surface of that membrane. Numerous small abscesses and ulcers appeared over the omentum and edge of the mesentery, more especially at that part where it was connected with the colon.

C A S E XVIII. (LIX. 15.)

A MAN, who appeared to be under fifty years of age, of a well-shaped body, somewhat fat, of a healthy complexion, a little inclining to brown, and whose hair and beard were black, having been cured in the hospital of Bologna of melancholic delirium with which he had been affected, took, on the day before he was to have left the hospital, half a drachm of the extract of black hellebore. This extract was prepared by pounding the recent roots with pure water; and was often exhibited to patients, without any bad effects, in the quantity of a scruple, and sometimes to those whose belly was not easily opened, even in the quantity of more than half a drachm. When this medicine was prescribed, the person taking it was ordered to drink, during its operation, cow-milk whey; but this patient had not done so: he had taken nothing else than the extract. In consequence of this dose he had several stools. In the beginning of the night, that is, about seven or eight hours after he had swallowed the extract, when no mischief was expected, he became affected with vomiting and pains in the belly. These seemed alleviated soon after having taken some warm broth, that is, about the second hour of the night; but at the fifth hour the same symptoms recurred.

Though he vomited no more than two or three table-spoonsful of a green blackish kind of matter, they again seemed to have abated so much that he went to bed before the sixth hour, and at that time appeared to be quiet and easy, at least he made no noise that indicated pain, so far as the patients in contiguous beds could observe. Nevertheless, at the eighth hour, a kind of sound issuing from his mouth having been heard, the attendants ran to his bed, where they found him already dead.

Appearances on Dissection.

EXTERNALLY. The limbs were not rigid nor contracted.

ABDOMEN. The stomach and the intestines externally appeared in different places inflamed. The ileum, in some places, was of the natural width; and in some narrower, and in others wider, than usual. Where it was narrower than ordinary, the coats were very thin, and not of a red colour; in other parts they were marked with red streaks. The stomach and the intestines were first washed out by water being passed through them, and then opened. The stomach, together with a small portion of the annexed gullet, seemed to be inflamed on the left side only. The intestines, here and there, were affected with inflammation, which however was less considerable in the small than in the large guts, except in the rectum; and

in it certain spaces were as much inflamed as those in the stomach. No violent degree of inflammation was seen in any part of this subject. The spleen was larger than usual, and was of a rosy colour. At the part in contact with the stomach, it was so flabby, that, when cut into, its internal parts seemed to flow out like a fluid. Nothing extraordinary was observed in the liver, except that the bile appeared through the coats of the gall-bladder to be of a light green colour.

THORAX. The lungs were found, and totally unconnected with the pleura. Something like a slender polypous concretion was found in the heart. The large vessels contained little blood.

HEAD. When the upper part of the cranium was removed, a small quantity of bloody serous fluid was discharged. The sinuses of the dura mater, and the large vessels of the pia mater, contained little blood. The brain, which was surprising in one who had been affected with melancholic delirium, was so exceedingly flabby, that, when completely taken out of the cranium, and placed upon a table, the hemispheres falling outwardly at each side, tore the posterior part of the corpus callosum, although it was no more than six days after the death of the patient. Notwithstanding that laceration, the fasciculus, which appears longitudinally through the middle of the corpus callosum, was seen in a natural state, on the upper
part,

part, where it was entire. When the brain was cut into, it was found that the vessels, both in the medullary substance, and in the choroid plexuses, were not destitute of blood; but a great degree of flaccidity was observed in every part, as well of the brain as of the cerebellum and medulla oblongata. The pineal gland, which was rather larger and of a more globular form than usual, was also flabby. Notwithstanding the excessive laxity of all the other parts, the arch which joins the right and left side of the third ventricle was not in the smallest degree lacerated.

CAUSES OF ENTERITIS.

PREDISPOSING CAUSE. This does not seem to depend so much on the general state of the system which predisposes to inflammatory complaints, as on some peculiarity, either natural or acquired, of the intestinal canal*. Persons advanced in years are more liable to enteritis than others.

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EXCITING

* MORGAGNI relates the following case, which marks very clearly how susceptible of inflammation the intestines are, in particular states of the system. "An unmarried woman affected with cholic pains, unattended with any symptoms of fever, having been much relieved by the operation of a glyster, which had brought off some bilious matter, and having become every day better, was no longer visited by her attending physician. Her servants, however,

EXCITING CAUSES. Besides all the circumstances enumerated as exciting causes of gastritis; the strangulation or constriction of any portion of the intestines, in consequence either of hernia or intussusception, (that is, the passing of one part of a gut within another) and dysentery, induce enteritis.

REMARKS ON THE CASES OF ENTERITIS.

THE first case affords a good illustration of the rapidity with which inflammation of the intestines destroys life †. It shows, too, how soon the favourable opportunity for blood-letting passes away in that disease.

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however, having given a suppository composed of honey, instead of an enema, which they were accustomed to exhibit every second night, she was immediately seized with an excruciating pain in the anus; and in the morning her pulse could not be felt. Along with the pain, there was so great a degree of constriction of the anus, that a glyster could not possibly be administered. When attempts were made, by means of emollient and anodyne remedies, to remove the pain and constriction, suddenly as great a relaxation of the affected parts as is met with in dead bodies took place; and about noon of that day she died.”

† MORGAGNI in his remarks upon this case mentions, that a monk at Bologna, who, although old, was very strong, died within twelve hours from the first attack of enteritis, notwithstanding every means that could be employed.

The third case proves how insidiously enteritis often invades: for although MORGAGNI imagined that a remission had taken place, yet, as there had been no symptoms of fever previous to the attack that proved fatal, it is perhaps more probable that the disease till then only threatened.

In the seventh case, the progress of gangrene was very clearly marked *. The worms observed in this and in the twelfth case, are to be regarded, not as exciting causes of the disease, but as an accidental circumstance.

The ninth case is an example of dysentery proving the exciting cause of enteritis.

The tenth, and following cases, as far the seventeenth, are all instances of the disease having been produced by hernia †.

In the seventeenth case, not only was the mesentery affected, but also in some degree the kidney.

The last case is a striking example of the pernicious effects of drastic purges in particular states of the system.

In nine of the cases, viz. the second, fourth,
sixth,

* The smell that arises from the presence of worms, so distinctly perceived in the different parts of the subject of this case, is a curious circumstance.

† No remarks upon hernia can be introduced in this part of the work, as they belong to local diseases.

sixth, eighth, tenth, thirteenth, fifteenth, seventeenth, and eighteenth, the patients were above fifty years of age.

SECT. VII. *NEPHRITIS*; OR, INFLAMMATION OF THE KIDNEYS.

INFLAMMATION of one or both kidneys, is known by the ordinary symptoms of inflammatory fever, being attended by dull or acute pain in the region of the kidneys, sometimes shooting along the course of the ureters, commonly accompanied with vomiting, and the frequent discharge of small quantities of deep red-coloured urine*, and sometimes also with costiveness.

In some cases, a sensation of numbness is felt in the leg on the affected side, and the corresponding testicle is drawn up; but these symptoms generally indicate calculus in the kidney or ureters.

The disease is distinguished from rheumatic affection of the lumbar region, by the patient being able to bend his back without suffering excruciating pain.

Nephritis differs from calculus in the kidney or
ureter

* The urine in some cases too is quite limpid.

ureter (which has been styled Nephralgia) by the symptoms of fever accompanying, or immediately following the attack of pain, and continuing without any remarkable intermission. Whereas, in nephralgia they do not occur until a considerable time after violent pain has been felt, and they frequently disappear entirely. In the latter case, too, the numbness of the thigh; and retraction of the testicle on the affected side, always take place,

In nephritis the pain is often extended over part of the belly, and imitates that of enteritis. But, as the bowels are always either open, or easily rendered so by glysters, the line of distinction between the two diseases is readily drawn. Sometimes indeed both are combined.

The terminations of nephritis are the same as those of inflammation of the other viscera within the abdomen.

Resolution may be expected, if the pain abate and the feverish symptoms diminish. The crises are, profuse universal sweat, copious discharge of thick loaded urine, and hæmorrhagy from the seat of the piles.

Suppuration is to be feared if the pain continue violent, and become throbbing, and if then frequent rigors supervene. When purulent matter is passed off with the urine, no doubt can remain.

Gangrene is a very uncommon event in this disease.

case. It is marked by the general symptoms that characterise it in other cases.

Sometimes the patient is carried off merely by the inflammation being communicated to other viscera. In such cases, the urine is suppressed, and symptoms of enteritis take place.

The inflammation is commonly seated in the substance of the kidney, and seldom in its proper capsule *. In some cases, a single abscess of a prodigious size is formed in it; in others, there are many abscesses.

CASE OF NEPHRITIS.

(XXXVI. 20.)

AN unmarried woman was affected with excessive vomiting, attended with fever. The vomiting ceased, but the fever remained; and a violent pain under the false ribs having supervened, she died within two days.

Appearances on Dissection.

ABDOMEN. Some very limpid serous fluid was found within the cavity of the belly. The stomach and intestines were much distended with air.

* Vide Dr. Baillie's Morbid Anatomy, pag. 178.

air. Each kidney was enlarged to more than three times its natural size. The left kidney contained between its proper investing membrane and cortical substance, especially in that part which was towards the spleen, a small quantity of fanious matter.

THORAX. In the cavity of the chest there was a little watery fluid. The lungs were found, except that they were marked with a very few black spots. The pericardium was full of serous fluid. From the ventricles of the heart fluid blood was discharged; the right ventricle, however contained an incipient polypous concretion.

CAUSES OF NEPHRITIS.

PREDISPONENT CAUSE. Many circumstances are mentioned as predisposing to nephritis: such as the structure of the kidney having become so altered, as to be very susceptible of inflammation; hence, old persons are more liable to the disease than others: the habit of constantly lying on the back: sedentary life: the frequent or immoderate use of fermented liquors, &c. Like other viscera, too, after they have been once inflamed, the kidneys are very liable to be again affected in the same manner.

EXCITING

EXCITING CAUSES. All the general exciting causes of inflammations may induce nephritis; but it is most commonly occasioned by some circumstance immediately affecting one or both kidneys. Thus, violent exercise on horseback or in a carriage, external injuries, over-exertion in some particular exercises or occupations, the use of large doses of diuretic medicines, &c. are the most frequent exciting causes of the disease.

THE case of nephritis affords no room for remark.

END OF VOLUME FIRST.

